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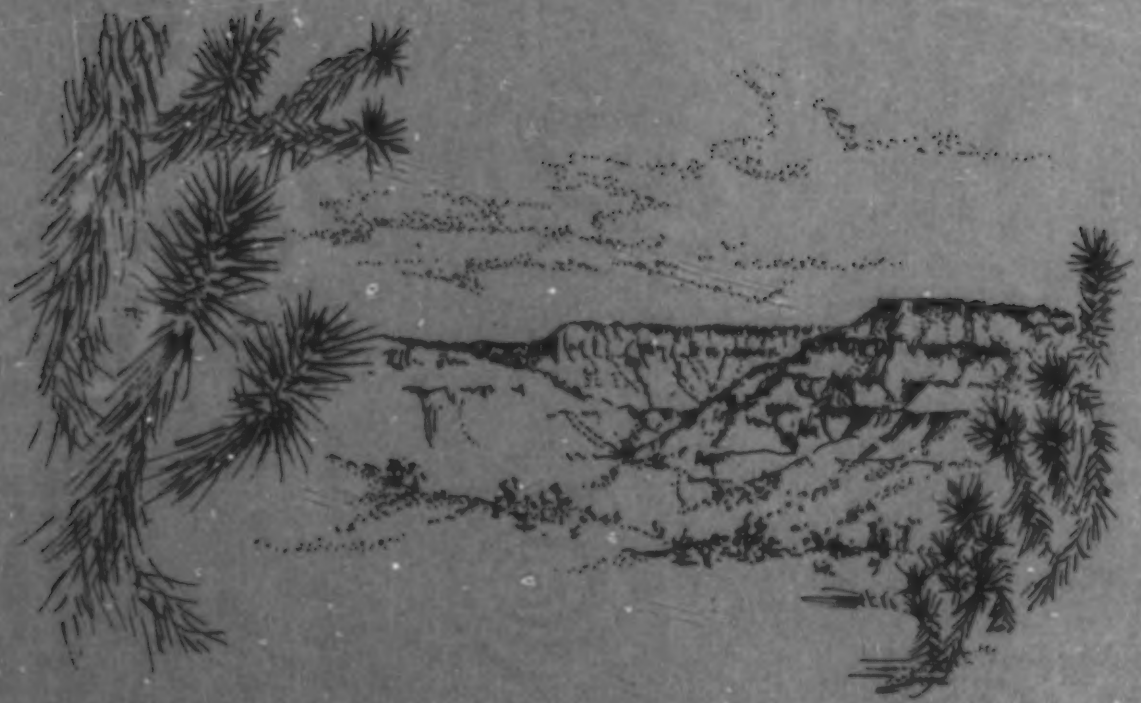
United States Department of the Interior
Bureau of Land Management
Arizona State Office

Arizona — Utah

June 1990

Final
Wilderness Management Plan
Paiute and Beaver Dam Mountains



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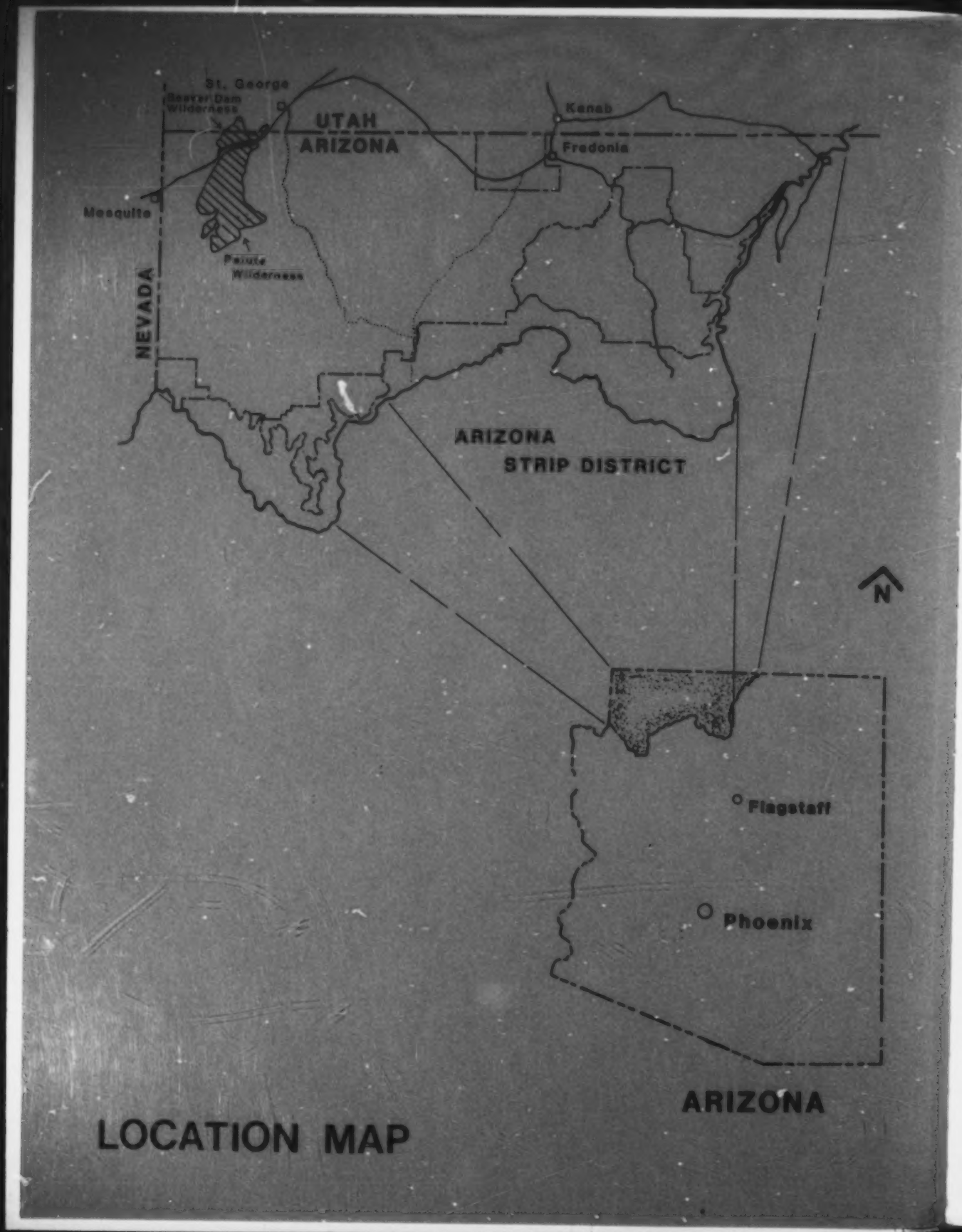

LOCATION MAP

FINAL
WILDERNESS MANAGEMENT PLAN
PAIUTE AND BEAVER DAM MOUNTAINS WILDERNESS

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Arizona Strip District — Arizona
Cedar City District — Utah
Shivwits and Dixie Resource Areas
Mohave County, Arizona and Washington County, Utah

June 1990

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Recommended by _____ 24 April 90
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Recommended by _____ 24 April, 1990
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Approved by _____ 2 May 1990
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Approved by _____ 10 May 1990
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PART I

INTRODUCTION

ORGANIZATION OF THE PLAN

This plan is organized into four basic parts which will explain the management strategy, objectives, policies and prescribed actions to achieve wilderness goals.

Part I introduces the reader to the Paiute and Beaver Dam Mountains Wilderness Areas and the management plan itself–its purpose and organization, area description, history and the general management situation.

Part II provides broad management guidance in the form of wilderness philosophy and national wilderness goals.

Part III sets forth the management strategy for the area by discussing the management unit concept, the approach to proposed projects or actions, and a brief explanation of the monitoring process.

In Part IV the wilderness management program is presented in two sections. The first section establishes objectives, policies and prescribed actions for each use or resource (called *elements* in this plan) identified for the wilderness area. Then, each Management Unit is discussed with more specific objectives, policies and actions for elements that play a prominent role in the management of the unit. The appendices supplement portions of the plan and include an environmental assessment (EA) of the impacts of the proposed actions and alternatives.

PURPOSE OF THE PLAN

The primary purpose of the plan is to provide guidance for the administration of the Paiute and Beaver Dam Mountains Wilderness Areas in the form of well-defined objectives, policies and prescribed actions for the various uses and resources within the wilderness. The plan also fulfills the Bureau of Land Management (BLM) Manual 8560 requirement that management plans be prepared for all BLM-administered wilderness.

The plan provides management direction for a 10-year period from 1990-1999. Evaluations will be made at least every five years or as dictated by significant changes in resource conditions or national management direction. Major plan revision will involve the same review process as the original plan. As this is designed to be a working document, minor revisions such as informational updates will be written into the document, dated and initialed.

LOCATION AND DESCRIPTION

The Paiute and Beaver Dam Mountains Wilderness Areas cover 104,300 acres of public land and dominate the northwest portion of the Arizona Strip and southwest Utah. The Virgin Mountains form the backbone of this area, rising more than a mile from the desert floor. Mt. Bangs, the highest peak at 8,012 feet provides a commanding view of the Basin and Range province to the west and the Colorado Plateau to the east. The Colorado Plateau and Basin and Range geologic regions meet and mix in these wilderness areas.

The two wilderness areas are separated by Interstate 15 as it winds through the spectacular Virgin River Gorge. Extreme faulting, folding and natural erosion by the Virgin River has resulted in a complex mixture of steep craggy cliffs, sandstone buttes and alluvial fans in this area. The various layers of sandstone, siltstone and fossil-laden limestone reveal 500 million years of geologic time.

The substantial elevation change in the Paiute has created a land of contrasts which includes several plant communities ranging from the hot Mohave Desert through stands of pinyon-juniper on up to ponderosa pine and Douglas fir on the cooler north-facing slopes. In addition there is a wide variety of smaller plant communities related to soil type, moisture, slope aspect and other factors.

The lower slopes of the Virgin Mountains are home for a variety of desert creatures, notably the threatened desert tortoise and the gila monster, North America's only poisonous lizard. Moving upslope into the rocky, sparsely vegetated canyons, desert bighorn sheep may be encountered, the result of a recent reintroduction of this animal to its native habitat. Bighorns can often be seen from I-15 in the Virgin River Gorge. Air quality is generally very good (Class II air quality rating) and visibility is, therefore, quite good. Occasional windblown dust reduces visibility for short periods.

Moving higher on the Virgin Mountains, the pinyon-juniper (P-J) community is the next major ecotype. This woodland area is important mule deer habitat as well as a home for a variety of birds, small mammals and predators such as bobcats and mountain lions.

Above the P-J zone, the ponderosa pine forest provides critical summer mule deer range and is a favorite area for those seeking remote hunting grounds.

The area has a long history of habitation and use by Native Americans and European immigrants. Numerous archaeological sites have been identified and there is evidence of early historical use such as an old steam boiler rusting away in Hancock Canyon, the remains of a shingle mill begun around the turn of the century.

The Virgin River, which runs through portions of both wilderness areas, is considered habitat for the woundfin minnow and the virgin river chub, which are both listed as endangered and threatened respectively, and the spinedace which is listed by the state of Arizona as endangered. The river also offers limited river running for several weeks during adequate spring run-off periods.

SIGNIFICANT HISTORY

A portion of the Paiute Wilderness (35,092 acres) was the former Paiute Primitive Area, which was designated September 25, 1975. A management plan for the area was approved in December 1976. The Primitive Area designation did not segregate the land from mineral entry but did close it to off-road vehicle (ORV) travel. The Virgin River Scenic Withdrawal of 1973 segregated the area from mineral location but not mineral leasing. It also closed the area to ORV use except on existing roads. Wilderness designation has now closed the area to all forms of mineral entry and vehicle travel except on specific roads designated to remain open. With the passage of the Federal Land Policy and Management Act (FLPMA) in 1976, the Paiute Primitive Area became an Instant Study Area for wilderness suitability. It was recommended for inclusion in the Wilderness Preservation System in a 1980 study submitted to the Department of Interior. The primitive area is now completely encompassed by wilderness and the primitive designation was removed by the Arizona Wilderness Act.

Portions of the Paiute and Beaver Dam Mountains Wilderness Areas were also part of the Virgin River Gorge Scenic Withdrawal of September 28, 1972. This withdrawal is currently under review for retention or revocation. A partial revocation is proposed with some areas in the gorge not included in wilderness to remain withdrawn for protection of the scenic resource.

On August 28, 1984, the Paiute and Beaver Dam Mountains Wilderness Areas (WAs) were designated by the Arizona Wilderness Act, a bill that was originated by a broad coalition of private citizens and groups. The formation of this wilderness bill by a coalition of interest groups and sponsored by the Arizona congressional delegation makes it unique in wilderness legislation.

GENERAL MANAGEMENT SITUATION

The Paiute Wilderness Area and the Arizona portion of the Beaver Dam Mountains WA are managed by the Shivwits Resource Area of the Arizona Strip District. The Utah portion of the Beaver Dam Mountains WA is managed by the Dixie Resource Area of the Cedar City District. A combined resource area office is located in St. George, Utah.

Activities within the wilderness include most of the multiple uses managed by the BLM. Grazing allotments, some of which are under allotment management plans (AMPs), cover the entire area. Wildlife habitat management plans (HMPs) guide wildlife management over the entire area, emphasizing deer, desert bighorn sheep, desert tortoise and endangered fishes. Pending final rulemaking by the U.S. Fish and Wildlife Service, some of the area will be under a desert tortoise recovery plan. There is also an operating gypsum mine in the Beaver Dam Mountains WA. The area provides recreation opportunities ranging from remote, backcountry experiences to motorized sightseeing.

Proper management of these complex wilderness areas will require careful consideration of the wilderness resource in relation to the various authorized activities, both wilderness-compatible uses and the nonconforming but accepted uses.

PART II

WILDERNESS MANAGEMENT DIRECTION

WILDERNESS PHILOSOPHY

The plan's introduction describes an area of marked elevation changes, resulting in several life zones from Mohave desert to Ponderosa pine.

This largely undisturbed area provides numerous opportunities for experiencing solitude, naturalness and mental and physical challenge. Additionally, a variety of other uses from grazing and mining to scientific study take place. This plan provides management objectives and policies that seek to maintain or enhance existing wilderness qualities while effectively managing the various uses in conformance with the Wilderness Act of 1964, the Arizona Wilderness Act and the Federal Land Policy and Management Act (FLPMA). These congressional mandates contain three concepts which form the basis for the BLM's Wilderness Management Policy.

The Wilderness Preservation Concept

Congress has directed the BLM to perpetuate the wilderness resource by managing designated wilderness areas so that their wilderness character is preserved unimpaired.

The Wilderness Use Concept

Congress has directed the BLM to provide opportunities for the public to use designated wilderness areas for recreational, scenic, scientific, educational, conservation and historical purposes in a manner so as to leave the wilderness area unimpaired for future use and enjoyment as wilderness.

The Nonconforming Use Concept

Congress has directed the BLM to accommodate in wilderness areas certain activities, existing uses and private rights which are generally nonconforming to wilderness preservation and wilderness use. The BLM must manage these uses so as to prevent or minimize impact to the area's wilderness qualities while allowing the holders to exercise their legal rights. As on nonwilderness public lands, some of the nonconforming but accepted uses may be restricted or excluded where particularly sensitive values occur or where the public interest would be better served by restricting or excluding them.

WILDERNESS GOALS

In addition, wilderness management goals have been established to obtain bureauwide consistency in the BLM wilderness management program. The following goals apply to all BLM-administered wilderness areas (BLM Manual 8560):

The first goal is to provide for the longterm protection and preservation of the area's wilderness character under a principal of nondegradation. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation and any ecological, geological or other features of scientific, educational, scenic or historical value will be managed so that they will remain unimpaired.

The second goal is to manage the wilderness area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as a wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use.

The third goal is to manage the area using the minimum tool, equipment or structures necessary to successfully, safely and economically accomplish the objective. The chosen tool, equipment or structure should be the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible.

MANAGEMENT DIRECTION

The fourth goal is to manage nonconforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's wilderness character. Nonconforming uses are the exception rather than the rule, therefore, emphasis is placed on maintaining wilderness character.

PART III

MANAGEMENT STRATEGY

The Paiute and Beaver Dam Mountains Wilderness Areas are characterized by unique natural features such as Ponderosa pine "islands" and the rugged Virgin River Gorge. It is largely undisturbed but man's influence is quite obvious in certain places-the designated open roads on Black Rock and in Cedar Pockets, the large number of range improvements in the area.

In examining the complex mixture of wilderness resources and existing uses the BLM feels the desired objectives can be achieved by zoning the area into management units. Each unit would emphasize management for one or more elements that would result in general enhancement of the wilderness resource and would follow the guidance set forth in the wilderness goal statements. All elements are discussed first in a general fashion in Part IV, the General Objectives for All Elements section, and then some are more specifically addressed under the management program for each unit in the Specific Unit Management Objective section.

In separating the wilderness into units, several criteria were considered:

1. What elements are currently being managed most intensively throughout the wilderness?
2. Can some or all of these elements be separated into specific geographic units?
3. If so, is the management activity wilderness compatible or wilderness enhancing?
4. Will managing a specific unit for certain elements cause conflicts with wilderness qualities or other elements?
5. Can conflicts be resolved within the guidelines of this plan and the wilderness management policy?
6. Can the allowed nonconforming uses, such as grazing or valid mineral claims, be accommodated in these units without degrading wilderness values?

It should be noted here that while management of certain elements will be emphasized, protection of the wilderness resource will receive priority in resolving conflicts.

After examination of the wilderness, five geographic units were considered appropriate, emphasizing management of certain elements that would maintain or enhance wilderness values. These units are described below (see map foldout, page 71):

West Virgin Slope Unit

Covers primarily the west slope of the Virgin Mountains. This unit will be managed primarily for protection and enhancement of desert bighorn sheep habitat but also, in the lower elevations (below 3,500 feet), for protection of desert tortoise habitat. Other recognized wilderness resources as well as nonconforming but accepted uses will also be managed as set forth in Part IV, the General Objectives for All Elements section, of this plan, but emphasis will be on the bighorn and tortoise habitat. The revised Virgin River/ Pakoon Basin and Black Rock HMPs will be used for guidance, subject to wilderness policy constraints.

Virgin Gorge Unit

This unit includes all of the Beaver Dam Mountains Wilderness in Utah and Arizona as well as portions of the Paiute in the Gorge. A large part of the unit can be seen from Interstate highway 15. The unprecedented situation of an interstate highway flanked by designated wilderness enables thousands of travelers to enjoy the unique scenery each year. A rest stop and BLM campground with an interpretive site adjacent to the wilderness areas provide opportunities for further enjoyment. Emphasis will be on preserving the scenic resource, which will involve generally maintaining the area as it exists today. Other elements to be specifically addressed will be wildlife (especially bighorn sheep and tortoise habitat), minerals (gyp mine) and recreation (hiking and river running).

Black Rock Unit

Includes the top of Black Rock Mountain and the area south of the Black Rock road as it winds

down Oak Canyon on the west side of Black Rock. This area has been identified as critical mule deer summer range. The open road through the unit provides access for camping, sightseeing and hunting. The unit also provides trailheads for backpacking into the Sullivan Canyon area. The unit will be managed primarily for wilderness recreation and mule deer habitat.

Sullivan Canyon Unit

Includes Sullivan Canyon with its numerous side canyons from the top of the Virgin Mountain ridge east to the wilderness boundary. Portions of an old road along the ridge north of Mt. Bangs and spur trails into Sullivan Canyon provide access for wilderness recreation. The unit will be managed mainly to provide opportunities for wilderness-oriented recreation.

The Coves Unit

Takes in Sand Cove, Pocum Cove and the area between the Black Rock and Ide Valley roads east of Pocum Cove. A large part of the unit is covered by P-J stands, with mountain shrub and sagebrush also plentiful. While opportunities for primitive recreation exist in the unit, there is very little use presently. The unit will be managed on a general wilderness management basis as set forth in Part IV, the General Objectives for All Elements seciton, with none of the elements receiving specific emphasis.

All actions proposed in wilderness will be analyzed through an EA following the National Environmental Policy Act (NEPA) process and policies set by this plan. Analysis will include:

1. Application of the minimum tool policy,
2. Consideration of impacts, including potential cumulative impacts, to the existing physical and social setting,
3. Attention to the management focus for the affected unit, and
4. Evaluation of viable alternatives. Emphasis will be placed on maintaining or enhancing wilderness character.

NEPA requirements will be accomplished in two ways:

1. Actions proposed in this plan which may impact the wilderness will be analyzed in an EA accompanying this plan.
2. Actions that are not proposed in this plan or are only mentioned as possibilities, such as new livestock or wildlife waters or trailhead parking facilities as well as improvement maintenance will be addressed in site-specific EAs that will be subject to the normal public review. Additionally, major maintenance actions involving the use of heavy equipment will be covered in the same manner.

The primary tool for achieving and maintaining the desired long term environmental conditions within both wilderness areas will be the Limits of Acceptable Change (LAC) process.

Because collecting baseline data, and implementing the LAC process is complex and time consuming, interim monitoring will be accomplished through an organized effort of ground and aerial surveillance. Ongoing vegetation, grazing and wildlife studies will also continue. The intent is to maintain and, where possible, enhance wilderness values during the time that the LAC plan is being developed.

The LAC plan will identify conditions that signal the start of undesirable changes in the physical environment or on visitor's perceptions of the physical and social environment. LAC seeks to define existing conditions, establish desired standards and set up indicators to be monitored for change. Indicators might include such things as campsite condition and frequency, trailing and erosion, cultural site vandalism or evidence of unauthorized vehicle use. The LAC plan will be developed by the end of FY 93.

Unwanted changes discovered by either interim monitoring or LAC will result in a variety of possible management changes that could range from disseminating information to physical trail closure or grazing management changes.

PART IV

WILDERNESS MANAGEMENT PROGRAM

GENERAL OBJECTIVES FOR ALL ELEMENTS

Administration

Management Objectives

The wilderness will be managed to preserve the integrity of the wilderness resource while conducting the necessary administrative functions.

Current Situation and Assumptions

Current Situation

The Paiute and Beaver Dam Mountains Wilderness Areas are administered primarily by the Shivwits Resource Area with a portion of the Beaver Dam Mountains (3,788 acres) administered by the Dixie Resource Area of Utah. Administrative responsibilities are vested with the area managers and carried out by natural resource specialists for the two resource areas and the district wilderness coordinators for the Arizona Strip District and Cedar City District. The district wilderness coordinators are also responsible for technical coordination of BLM policy and regulations for wilderness management and serve as liaisons between the district and resource areas.

The wilderness is administered under the authority and provision of the Federal Land Policy and Management Act of 1976, the Wilderness Act of 1964, and the Arizona Wilderness Act of 1984. Regulations and guidance are found in 43 CFR 8560, Management of Designated Wilderness Areas, and BLM Manual 8560.

Administrative activity has, until now, been related to the various multiple use programs such as grazing, wildlife, fire control and minerals. Recreation use has been light and unregulated, with hunting, camping, hiking and backpacking the most common recreational activities with some river running during years of adequate spring runoff.

Fee permits or registration for recreation use have not been required.

Communications are adequate to good in most areas due to a BLM radio repeater on top of Black Rock Mountain. Some locations, such as canyon bottoms, make radio communication difficult however.

There are approximately 15 acres of private land and no state lands within the Arizona portion of the wilderness areas. The Utah part of the Beaver Dam Mountains Wilderness has 1,083 acres of state land.

The two wilderness areas are separated in the Virgin River Gorge by Interstate Highway 15 (I-15). Included in the area between the wildernesses are a state-operated highway rest area and a BLM improved campground.

Several areas are susceptible to off-road vehicle violations due to ease of access along the boundary and along designated open roads that run through each wilderness. These roads (known as the Cedar Pockets road, the Black Rock road, and the Trails End road) will be maintained within the 60-foot corridor provided in the legislation using standard road maintenance equipment.

There is a lifetime lease of 4.8 acres in the Paiute Wilderness along the Elbow Canyon road with several improvements, including a cabin, fenced area, reservoir, improved spring and pipeline and an old orchard.

There is a gypsum mine along the Cedar Pockets road in the Beaver Dam Mountains Wilderness which has been operating sporadically under a plan of operations which was approved in March 1984.

A powerline that provides electricity and phone service to the I-15 rest stop and campground generally parallels the Cedar Pockets road through the Beaver Dam Mountains Wilderness. Both the road and powerline are excluded from the wilderness area.

A 700-acre enclosure was constructed on the west slope of the Virgin Mountains under a cooperative agreement between the BLM and Arizona Game and Fish Department (AGFD) to facilitate the reestablishment of bighorn sheep as well as

to provide a controlled study area. The enclosure, when constructed in 1978, was to have a 15-year life span. The enclosure was determined to be non-impairing to the Paiute Primitive Area in which it was constructed.

Motorized travel for administrative purposes in the past has been limited to infrequent trips by resource area biologists and range conservationists on existing roads or ways in order to do resource studies. Except for the specified open roads, these routes are now closed to motor vehicles.

Helicopters have been used occasionally by BLM and AGFD to monitor raptor habitat, do big game surveys (deer and bighorn sheep) and for fire suppression.

Search and rescue operations have been infrequent in the area to date with most situations associated with the fall deer hunt and spring river running activities.

There is a heliport inside the Paiute Wilderness on Black Rock, and a fire lookout and administrative site just outside the wilderness in the same area. The heliport was constructed in 1973 when a decision was made to utilize a helicopter in fire suppression operations on the district.

The present location was determined to be the most suitable in terms of proximity to the fire crew quarters and access to areas of high fire frequency. The site was reviewed by the Office of Aircraft Safety (OAS) in 1985 and it was determined to be the only feasible site in the vicinity. Proposed alternative sites outside the wilderness were found to be unsafe because of slope and nearby trees.

There is an interagency agreement between the BLM and the Federal Aviation Agency (FAA) in which the two agencies agree to seek voluntary cooperation with aircraft operators to fly at a minimum altitude of 2,000 feet over wilderness areas.

Assumptions

Wilderness and its management will be an increasingly important public land issue. Additional funding and personnel will be needed for adequate management in the future.

Visitation to the wilderness will increase as will violations of wilderness laws and regulations.

There will be an occasional need for emergency search and rescue operations involving motorized equipment or vehicles.

Management Policies

All administrative activities will be accomplished so as to minimize adverse effects on the wilderness resource. BLM will aggressively pursue investigations of wilderness violations and take appropriate actions to eliminate the problem, preferably through information and education efforts.

Administrative activities will be done using the minimum tool, equipment or structure necessary to successfully, safely and economically accomplish the objective.

Management will seek to build a close working relationship with individuals, groups and other government agencies that use or influence use of the wilderness.

Use of motorized vehicles or equipment for demonstrated emergency uses such as fire suppression, search and rescue, or law enforcement may be approved by the authorized officer.

Nonemergency motorized vehicle or equipment use for administrative purposes must be approved by the appropriate authorized officer. Vehicle use will be the exception rather than the rule.

Administrative aircraft use by BLM or other agencies below 2,000 feet will be planned and conducted in a manner that ensures the least possible intrusion on the wilderness. Management guidelines include but are not limited to:

- Aircraft use will be the only practical alternative, kept to a minimum, and be as site-specific as possible.
- Flights will be scheduled at times and locations that minimize impacts on visitors' wilderness experience.
- Landing requests will be evaluated through the EA process on a site-specific basis. Authorized officer approval is required.

BLM will seek voluntary compliance by all aircraft users with the 2,000-foot minimum altitude prescribed by the BLM/FAA agreement.

Nonconforming uses covered by special provision in Section 4(d) of the Wilderness Act will be administered for minimum impact on the wilderness resource. However, such administration shall not negate the intent of Congress concerning these uses as expressed in the Wilderness Act of 1964 and the Arizona Wilderness Act of 1984.

The lifetime lease in Elbow Canyon will be allowed to terminate according to the terms of the lease.

Proposed actions not covered in this plan will be analyzed in environmental assessments and will include detailed analyses of alternative methods to the use of motorized vehicles and equipment.

Management Actions

The Paiute and Beaver Dam Mountains Wilderness Areas are currently monitored bimonthly. All BLM personnel are instructed to report any activities or changes observed during field trips. A patrol and monitoring record is being maintained and includes documentation of monitoring trips and all authorized or unauthorized activities.

The district will pursue funding of a volunteer, temporary or WAE wilderness ranger position if monitoring indicates significant and recurring violations of wilderness laws.

The LAC monitoring plan will be developed cooperatively by the Shivwits and Dixie resource areas. Field studies will be done cooperatively by the Shivwits and Dixie resource areas.

Administrative boundary signs or road closure signs will be placed at appropriate locations. Signs will be visible but unobtrusive.

BLM will take appropriate measures, which could range from signs to physical barriers, to eliminate vehicle access on roads and ways closed by wilderness designation.

The Arizona Strip and Cedar City districts will submit boundary maps and descriptions to the Arizona and Utah BLM state offices for review and approval. The maps and descriptions will be submitted with the final Wilderness Management Plan.

Existing structures will be inventoried and, if found to be abandoned and of no historical significance, may be removed.

Recreation

Management Objective

The area will be managed to provide a spectrum of opportunities for primitive recreation, solitude, physical and mental challenge, and inspiration consistent with preservation of wilderness values.

Current Situation and Assumptions

Current Situation

Recreation use from all sources is estimated to be 800-1,000 user days per year. This includes such activities as hunting, hiking, backpacking, sightseeing, river running and picnicking.

The old Paiute Primitive Area brochure indicated seven trailheads around the edge of the area, although none are improved or maintained. While there are no developed recreation trails in the wilderness, the Paiute contains several old roads and jeep trails as well as cattle trails that can be and are used for access, primarily on Black Rock and along the Virgin Mountains. In the Beaver Dam Mountains there is an existing jeep trail in the Utah portion of the Cedar Pockets Wash that could be used for foot access by recreationists. This location may also be subject to motor vehicle violations due to the increasing number of all-terrain vehicles (ATVs) in the area.

Deer hunting has been a significant use along the top of Black Rock Mountain and in the Cottonwood Canyon area. Several trails branching off the "cherry-stemmed" Black Rock road have been popular camping and parking spots in the past. These are now closed to motor vehicles. Problems of motor vehicles in the wilderness are expected to be small in the near future because of the reduction in deer permits, from 1,200 in 1981 to 200 in 1985. The area was closed to deer hunting in 1986. This situation will change if the deer herd and permits return to earlier levels. These areas are currently signed with small, unobtrusive wilderness boundary signs that advise the public of closure but do not physically block vehicle access.

Commercial use in the Paiute-Beaver Dam Mountains Wilderness has been infrequent, primarily related to guided hunts for deer or lions. Some violations of the closed-road rule have been noted during the fall hunting seasons.

The Virgin River Campground, while not in the wilderness, is surrounded by it and provides thousands of visitors each year with a view of the Virgin Gorge portion of the wilderness. An interpretive site at the campground also provides information on geology and cultural history. Registration at the campground indicates an annual use of about 2,600 visitor days (1 visitor day = 12 hours).

There is noncommercial kayaking and floating activity in the Virgin River Gorge for a 4-6 week period in April and May during the spring run-off season. Estimated use is 40-70 persons per week

during this period. There are three known put-in or take-out points within the wilderness, one at the Virgin River Campground and two others that require parking in the I-15 highway right-of-way and are somewhat dangerous because of the highway traffic. Boating activity is unregulated.

Assumptions

General nonhunting recreation use will increase slightly in the near future (5-10 years).

Deer hunting will remain closed until deer populations increase and resume again when populations are sufficient to allow hunting.

Increasing numbers of travelers on I-15 will have an opportunity to view the Virgin River Gorge.

Commercial guiding for mountain lion will continue on a small scale in the Black Rock area.

Commercial use will increase slightly if bighorn sheep hunting becomes possible or if nonresidents are allowed to guide for lions in Arizona.

Visitor exposure to natural environmental hazards and lack of convenience is part of wilderness recreation.

Noncommercial river running will continue and a demand for commercial trips may develop.

Hunting pressure will increase slightly for small game species due to the population growth in the area. Big game hunting pressure will remain static or move up slightly.

Hunting and trapping will be carried out in accordance with state laws.

Management Policies

Regulation of recreation activities will be kept to a minimum in order to provide wilderness experience opportunities.

New trails will not be constructed. Existing trails will be maintained as needed based on level of use. Trailheads may be maintained or improved if necessary to protect wilderness resources. New trailheads may also be developed to protect wilderness resources.

Signs within the wilderness will be the minimum required to provide necessary information.

Commercial and private use of horses or other pack stock will not be restricted unless potential damage is indicated through monitoring.

Commercial use of the wilderness will be regulated through the Special Recreation Permit process. Appropriate stipulations to protect wilderness values will be specified in the permits.

Management Actions

The Shivwits Resource Area will continue to set up a hunter information station prior to the opening day of deer season to provide information on wilderness.

Existing trails and trailheads will be inventoried and monitored to determine the need for maintenance, improvement or new sites.

River running will be monitored to prevent any resource damages.

Additional recreation policies and actions can be found in the Sullivan Canyon, Black Rock, and Virgin Gorge Management Unit sections of this plan (Part IV, the Specific Unit Management Objectives section).

Grazing Management

Management Objective

The objective is to allow grazing use to continue at existing levels while preventing any adverse impact on the wilderness resource.

Current Situation and Assumptions

Current Situation

There are presently 12 grazing allotments that are partly or wholly within the Paiute-Beaver Dam Mountains Wilderness Areas. Approximately 4,430 AUMs of active preference are within the wilderness (see Table 1 for allotment breakdown).

The existing improvements in the wilderness include fences, reservoirs, pipelines, developed springs, corrals, livestock trails, roads, land treatments and a cabin. Also, 15 range study plots are located within the wilderness. Of the 12 allotments involved, four are under intensive management and eight receive maintenance level management.

Vegetation types vary from Mohave desert to Ponderosa pine with large areas covered with mountain shrub and pinyon-juniper types.

TABLE 1

GRAZING ALLOTMENTS IN PAIUTE-BEAVER DAM WILDERNESS AREAS

Bureau of Land Management, Arizona Strip District

Allotment	State(s)	Total Active Preference (AUMs)	Estimated AUMs in Wilderness	Percent of AUMs in Wilderness
Lambing	AZ/UT	471	153	32
Apex	AZ/UT	366	37	10
Cedar Pockets	AZ/UT	271	79	29
Highway	AZ	260	83	32
Cedar Wash	AZ	374	374	100
Mountain Sheep	AZ	84	84	100
Sullivan Canyon	AZ	962	875	91
Littlefield	AZ	2,705	1,217	45
Cottonwood	AZ	1,831	37	2
Mud and Cane	AZ	4,716	1,344	29
Little Wolf	AZ	280	75	27
Black Rock	AZ	1,463	73	5
Totals		**13,783**	**4,431**	**32**[1]

Source: Arizona Strip District records

[1] Average

Assumptions

Utilization levels and patterns of use will remain generally as they are now.

Ranchers will occasionally need motorized vehicles and mechanized equipment for range improvement maintenance and other grazing management needs.

Management Policies

Grazing will continue pursuant to Section 4(d)(4) of the 1964 Wilderness Act and House Report 96-1126 which provides general grazing management direction.

Adjustments in grazing use will be based on BLM range monitoring studies, allotment evaluations and consideration of impacts on all natural resources.

All newly proposed range improvements or significant modifications to existing improvements will be evaluated in an environmental assessment. New improvements will be allowed for the management and protection of wilderness values rather than to accommodate increased numbers of livestock.

Whenever possible, new range improvements will be located outside the wilderness.

Motorized vehicle or equipment use for livestock management or improvement maintenance will be authorized when determined through the EA process to be the only practical alternative and not to have a significant adverse effect on the natural environment (see Appendix B for more information).

Management Actions

Monitoring studies, including utilization, trend, actual use, livestock counts and precipitation data gathering will be continued.

An inventory of all range improvements within the wilderness is being completed. Improvements which have been abandoned or are determined to be unnecessary to the grazing operation may be removed.

Maintenance plans developed under Appendix B procedures for improvements within wilderness will be incorporated into existing and any new allotment management plans and made a part of each grazing permit.

Annual coordination meetings will be held with all affected grazing permittees to review and update the maintenance plan.

Existing AMPs are being revised, when necessary, to reflect wilderness management policies. New AMPs will also incorporate these policies.

Wildlife

Management Objective

Wildlife resource management will be conducted to complement wilderness values by managing for an abundant and diversified native flora and fauna in balance with the habitat.

Current Situation and Assumptions

Current Situation

Wildlife management in the Paiute-Beaver Dam Wilderness Areas is guided by the Black Rock and Virgin River-Pakoon Basin HMPs. In general, these plans seek to enhance the quality and quantity of habitat for all wildlife species. Several species are given priority for habitat protection and enhancement: They include three threatened or endangered fishes, desert tortoise, peregrine falcon, bighorn sheep and mule deer [see Table 2 for Threatened and Endangered Species (T&E)].

The Endangered Species Act of 1973 as amended in 1982 directs management for the protection and recovery of T&E species. The Black Rock HMP stresses enhancing mule deer habitat and providing suitable bighorn sheep habitat. Several wildlife water catchments and spring developments have been completed in connection with these programs. Six water catchments, 5 spring developments, a 700-acre enclosure and 2 fenced riparian areas are in place within the wilderness. Specific policies and actions for bighorns and mule deer will be presented in the West Virgin Slope Unit, Virgin Gorge Unit and Black Rock Unit sections of this plan (Part IV, the Specific Unit Management Objectives section).

The wilderness contains approximately 3,500 acres of desert tortoise habitat, primarily in the lower elevations of the West Virgin Slope and Virgin Gorge Units. The tortoise is listed as a threatened species.

Riparian communities associated with springs or seeps are generally in good condition. Two wet meadow areas at Sullivan Spring and Elbow Canyon are fenced to prevent livestock impact. Other areas may be proposed for fencing in the future. Riparian habitat along the Virgin River is made up primarily of *Tamerix* (salt cedar) thickets.

Portions of the Virgin River are considered habitat for the woundfin minnow (*Plagopterus argentissimus*) and the Virgin River chub (*Gila robusta seminuda*), which is federally listed as threatened. However, according to the USFWS Woundfin Recovery Plan, woundfin numbers have been greatly reduced in the stretch of river that runs through the wilderness because the river is intermittent due to irrigation diversions upstream. The Virgin River spinedace (*Lepidomeda m. mollispinus*) are also listed by the state of Arizona as being in jeopardy (see Table 2).

Assumptions

Diversity and abundance of wildlife populations will depend mainly on natural processes; however, minimal human influence may be necessary with some species to promote viability and stability in the population.

More upstream water control projects will be proposed on the Virgin River system that may further affect fish habitat in the wilderness.

Wildlife managers will occasionally need motorized vehicles and mechanized equipment for habitat improvements, maintenance and other management activities.

Management Policies

Jurisdiction and responsibilities of the respective state agencies regarding the management and protection of fish and wildlife species are not changed by wilderness designation.

In coordination with the state agencies, BLM will make habitat management recommendations based on a need for protection of wilderness resources.

Management will be directed toward long-term goals of ensuring diversified natural levels of flora and fauna.

Consultation with the USFWS is required if it is found that a proposed management action may have an impact on T&E species.

TABLE 2

THREATENED OR ENDANGERED SPECIES

Bureau of Land Management, Arizona Strip District

(The species listed in the following categories do or may occur within the wilderness in Arizona or Utah)

SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

Animals

1. Woundfin minnow (*Plagopterus argentissimus*)
2. Peregrine falcon (*Falco peregrinus anatum*)
3. Bald eagle (*Haliaeetus leucocephalus*)
4. Desert tortoise (*Gopherus agassizii*)
5. Virgin River chub (*Gila robusta seminuda*)

SPECIES THAT ARE CANDIDATES FOR FEDERAL LISTING

Animals

1. Virgin River spinedace (*Lepidomeda mollispinus mollispinus*)
2. White faced ibis (*Plegadus chihi*)
3. Ferruginous hawk (*Buteo regalis*)
4. Western snowy plover (*Charadrinus alexandrinus nivosus*)
5. Long-billed curlew (*Numeicus americanus*)
6. Southern spotted owl (*Strix occidentalis lucida*)
7. Spotted bat (*Euderma maculatum*)
8. Merriams kangaroo rat (*Dipodomys merriami frenatus*)

Plants

1. Camissonia exilis
2. Cirsium virginensis

ARIZONA STATE-LISTED SPECIES (NOT ON FEDERAL LIST)

1. Common black hawk (*Buteogallus anthracinus anthracinus*)
2. Great egret (*Casmerodius albus egretta*)
3. Snowy egret (*Egretta thula brewsteri*)
4. Black-crowned night heron (*Nycticorax nycticorax hoactle*)

Proposed wildlife improvements will be analyzed through a site-specific EA.

Motorized vehicle or equipment use for wildlife management or improvement maintenance will be approved by the authorized officer only when it is determined through the EA process to be the only practical alternative and would not have a significant adverse effect on the natural environment. The procedure will be similar to the process described for range improvements in Appendix B.

Management Actions

Those portions of the Black Rock and Virgin River-Pakoon Basin HMPs dealing specifically with objectives and actions within the wilderness are being reviewed and amended, if necessary, to accommodate BLM wilderness policy and the objectives of this plan.

Riparian habitats will be inventoried to determine the condition of specific areas and, if necessary, proposals for protection will be made.

Annual meetings with AGFD and BLM wildlife and wilderness specialists will continue in order to coordinate wildlife management functions in the wilderness.

Additional policies and actions can be found in the management unit portion (Part IV, the Specific Unit Management Objectives section) of this plan.

Minerals

Management Objective

The objective is to ensure the protection and/or enhancement of wilderness values while allowing valid existing mineral rights to be exercised in accordance with the Wilderness Act of 1964 and the mineral laws.

Current Situation and Assumptions

Current Situation

Mineral activities in the Paiute Wilderness have been limited to sporadic exploration primarily around Mt. Bangs, Sullivan Canyon and the west slope of the Virgin Mountains. While some evidence of copper, tungsten, beryllium and lead have been found, the U.S. Bureau of Mines and U.S. Geological Survey (USGS) judged the area to have "at best a low mineral potential." The USGS judged the oil and gas potential to be low as well.

The Beaver Dam Mountains Wilderness contains a fairly extensive deposit of high grade gypsum along both sides of the Cedar Pockets road. Sporadic mining operations over the past two years, under a plan of operations approved by the Arizona Strip District in March, 1984, have caused about 7 acres of surface disturbance. An October 1985 validity examination on a portion of the gypsum claims found that 80 acres of claims met BLM validity requirements.

The Apex Mine, a source of gallium and germanium which are used in semi-conductor and optical glass technology, is about 1½ miles from a section of the Beaver Dam Mountains Wilderness. The operators, St. George Mining Corporation, have stated that the mineral veins they are now working may extend underground into the wilderness and that they may pursue development of these veins in the wilderness under "extralateral rights" accorded them by 30 USC 26.

The Paiute-Beaver Dam Mountains Wilderness Areas contain the following claims and leases:

	Arizona	Utah
Lode Claims	32	6
Placer Claims	26	5
Oil and Gas Leases	0	0

The area was closed to mineral entry by the Arizona Wilderness Act of August 28, 1984.

All claimants have been notified of the change in status.

Assumptions

The existing gypsum operation will continue and an expansion of operations may be proposed.

No oil and gas activity is expected.

Management Policies

As of August 28, 1984, the Paiute and Beaver Dam Mountains Wilderness Areas are closed to all forms of appropriation under the mining laws and laws pertaining to mineral leasing, subject to valid existing rights.

Any mining operation, including assessment work, which will cause surface disturbance beyond the definition of casual use will require a plan of operations. Casual use is defined as operations that result in negligible surface disturbance and do not require the use of motorized vehicles or equipment, explosives or landing of aircraft.

Submission of a plan of operations will require a validity examination by a qualified BLM minerals examiner to determine if the claims were valid as of the date of wilderness designation as well as at the time of examination.

Operators must post a performance bond before plans of operation will be approved.

Proposed expansion of operations at the existing gypsum mine in the Beaver Dam Mountains Wilderness will require an environmental assessment which will be subject to public review.

If claimants with valid existing claims pursue extralateral rights, they will be contested by the BLM so that a proper determination of those rights can be made.

Management Actions

Inactive claims will be monitored quarterly to check for unauthorized surface disturbance.

The Cedar Pockets gypsum mine will be monitored biweekly during periods of operation to insure compliance with the approved plan of operations.

Cultural Resources

Management Objective

The management objectives are to inventory, evaluate, preserve and protect cultural resources in compliance with state and federal laws and BLM policy.

Current Situation and Assumptions

Current Situation

Numerous archaeological and historic cultural sites are known to exist in the area, although official inventories have been few. Two inventories, one for the construction of I-15 and the other for the highway rest area in 1967-1969, disclosed a total of 35 sites and indicated the area may be rich in cultural resources. Predicted site types include lithic and ceramic scatters from the Archaic Period as well as more recent types such as Anasazi and Basketmaker cultures. Evidence of dwellings and other structures has also been reported.

Historical sites are associated primarily with the Mormon colonization of the area in the late 19th and early 20th centuries. No inventory has been conducted on these sites, although several, such as the old sawmill in Hancock Canyon, are known to exist.

Cultural inventory for the area is a low priority for the cultural resource program. The resource does not appear to be immediately threatened from destructive forces although illegal "pot hunting" is being reported in the eastern portions of the Arizona Strip and Cedar City districts.

Assumptions

There are significant cultural resources in the wilderness that have yet to be inventoried.

If visitor use increases, there is increased probability that cultural sites will be disturbed.

Wilderness designation will afford some measure of protection for cultural resources over and above prior protection.

Management Policies

Inventory will be permitted as needed to record and evaluate cultural resources.

Intensive site study and/or site stabilization involving surface disturbance will be analyzed through the EA process.

Cultural sites will be accorded protection from vandalism or inadvertent disturbance as prescribed by the Archaeological Resources Protection Act of 1979 and the Wilderness Act.

Sites that meet the eligibility criteria will be nominated to the National Register of Historic Places.

Management Actions

Information regarding laws that protect cultural resources will be included in wilderness brochures.

Lands and Realty

Management Objective

The objective is to manage lands and realty activities so as to prevent undue and unnecessary degradation of wilderness resources while allowing valid existing rights to be exercised accordingly.

Current Situation and Assumptions

Current Situation

No rights-of-way are authorized to be granted, issued or renewed over, upon, under or through designated wildernesses, per Section 501 (a) of the Federal Lands Policy and Management Act of 1976.

Excluded from the Beaver Dam Mountains Wilderness area by the congressional report associated with the Arizona Wilderness Act is an existing 30-foot overhead telephone and powerline right-of-way (ROW) that services the rest stop and campground along I-15 in the Virgin River Gorge.

The highway right-of-way plus 400' on either side serves as the north boundary for Paiute Wilderness and the southern boundary for the Beaver Dam Mountains Wilderness.

There is a 40-acre private inholding of which approximately 15 acres is on the northwest corner of the Paiute Wilderness at the mouth of the Virgin River Gorge (T41N R14W Sec. 30 SW¼SW¼).

The terrain is extremely rough and precipitous. There have been no developments or access routes constructed. An exchange proposal from the owner is currently under consideration.

All Arizona state surface and subsurface holdings were conveyed to the federal government on April 11, 1985. There are approximately 1,083 acres of Utah state surface and subsurface in the Beaver Dam Mountains Wilderness Area. The Utah state inholdings are located in T43S R18W Sec. 36 and T43S R17W Secs. 32 and 36.

The Virgin River Gorge Recreation Area, with 21,790 acres in the Virgin River Gorge, most of which is now designated wilderness, was withdrawn from all forms of appropriation except mineral leasing by the Department of Transportation (DOT) in 1959 to protect scenic values. This was subsequently replaced by a BLM withdrawal in 1973. In a 1986 draft withdrawal review, the BLM proposed to terminate the portion of the scenic withdrawal now protected by wilderness designation. Those areas within the gorge not included in wilderness would remain withdrawn while several small parcels outside the gorge would be returned to multiple use management.

Assumptions

Routine inspections can be accomplished either without motorized vehicles or by driving along existing open roadways.

Some maintenance may require the entry of motorized vehicles and/or equipment into the wilderness along the powerline right-of-way and I-15.

If the Arizona Strip District recommendation on the Virgin Gorge Scenic Withdrawal is accepted, there will be no effect on wilderness.

Management Policies

Existing ROWs will be allowed to continue subject to mitigation to protect the wilderness resource. BLM will monitor all ROWs to ensure compliance with wilderness policies.

Use of motorized vehicles or equipment for nonemergency maintenance in connection with ROWs must be analyzed by an EA and approved by the authorized officer prior to operations.

The BLM will negotiate acquisition of the private inholding through direct purchase or land exchange.

Acquisition of Utah state land within wilderness will be pursed through the exchange process.

Management Actions

The BLM has notified all ROW permittees of the change in land status and is coordinating with these permittees on maintenance needs and use of motorized vehicles or equipment.

The BLM will contact the owner of the private inholding to initiate exchange or purchase proposals.

BLM has contacted the state of Utah and an exchange is in progress for state lands in wilderness.

Water

Management Objective

Water resources and water rights will be monitored and managed to preserve the present natural flow and quality and to prevent human-caused contamination.

Current Situation and Assumptions

Current Situation

The known waters in this area are the Virgin River, fifty-two springs or seeps, two wells and three stockponds. All of them are on public land. Seven springs and the three stockponds have Arizona State water rights filings held by individual users. The two wells, owned by the Arizona State Department of Transportation, are not in wilderness but are sources of drinking water for recreationists. One is presently unused and the other provides water to the rest stop and the BLM campground.

The Virgin River is the primary drainage for the area and is intermittent through part of the area just above "The Narrows," sometimes becoming dry during the early summer months. Spring runoff can result in flows of several hundred cubic feet per second (cfs) for a short period in March and April or after summer thunderstorms. Perennial flow occurs within "The Narrows" due to emergence of several springs in or adjacent to the riverbed. Some have been buried by the freeway construction, but appear to provide subsurface flow into the river. The Virgin River is normally turbid with large amounts of suspended sediments and high total dissolved solids. Continued normal flow is considered to be an important wilderness value.

Water Quality

Virgin River. Due to high total dissolved solids and suspended sediments plus possible contaminants or pollutants from the upper inhabited watershed, the water is unsafe for human consumption.

Cedar Pockets Well. Located at and providing water for the rest stop and BLM campground is a good maintained potable water source available to those entering the nearby wilderness areas.

Beaver Dam Area. There are no known seeps or springs in this area.

Palute Area. All of the seeps and springs are in this portion of the wilderness area. Information

on water quality and quantity of all the waters is currently being collected. There are several known springs of acceptable quality which may be used for human consumption if necessary. The waters should be treated, preferably by boiling, to reduce the risks resulting from possible contamination.

Assumptions

Water is an important characteristic of wilderness and vital for its use and enjoyment.

Water from the Virgin River, stockponds and waterholes is generally unfit for human consumption.

The use of the waters in the area for recreational purposes will increase steadily as visitor use increases.

Increased use may necessitate monitoring for coliform contamination (at known points of use), especially during drought periods when the users would concentrate around the more dependable springs.

Development in the upper Virgin watershed from St. George to Zion National Park may eventually reduce the average intermittent flow in the Virgin River by increased diversions and wells and possibly reduce the perennial flows from the springs within "The Narrows."

Development south and east of Littlefield could result in attempts at water rights filings on wilderness springs to obtain better quality water than wells outside the wilderness can produce.

Management Policies

Water rights and waters currently used for wildlife and livestock watering purposes will be maintained. Additional development needs for water will be considered according to wilderness management guidelines and policies of this plan.

New requests for uses within the wilderness for unappropriated waters will be opposed by the BLM where the use is inconsistent with wilderness management policy or where the BLM has a vested right to the water.

To achieve the purposes of this wilderness, BLM may acquire water by appropriation for wilderness or related purposes under applicable state law.

Management Actions

When fire occurs in areas where soils are sensitive to erosion, grazing will be deferred until vegetation has been reestablished to minimize impacts on water quality.

Springs will be periodically monitored for contamination and pollution. Special emphasis will be placed on those springs that are used by recreationists.

Selected spring sites will be monitored to protect from overuse by man or animals and prevent erosion and riparian degradation.

Water quality and flow on the Virgin River will be monitored by analyzing data from the Woundfin Recovery Plan and existing stream gauges.

Water filings will be made, where unappropriated water exists and state law permits, for recreation, wildlife, stock water and wilderness resources.

Virgin River instream flows will be quantified and water filings made under Arizona Law to protect wilderness and other resource values.

Wildfire

Management Objective

Generally, fire will be allowed to play its natural role in the wilderness ecosystem subject to requirements for public safety and protection of private and other nonfederal property. Critical wilderness values such as Joshua trees or desert tortoises habitat will be aggressively protected.

Current Situation and Assumptions

Current Situation

Vegetative types vary widely, from Mohave desert scrub to ponderosa pine, with sagebrush, mountain shrub and pinyon-juniper included between the two extremes. Adding to the complexity are slopes ranging from steep, almost vertical canyons to relatively flat or gently rolling hills.

Several large old burns in the southwest portion of the Paiute indicate a significant fire history but only a few small fires have occurred in recent years. There is a heliport in the wilderness with a communications site, fire lookout and administrative site just outside the boundary. It is anticipated that a helicopter will be stationed at the heliport from June 1 to September 15 during periods of high fire danger.

Historically, suppression practices have varied. Prior to 1981, full suppression methods were required for all fires. The Modified Fire Suppression Plan, approved in 1981, divided the Shivwits Resource Area into several suppression zones with methods ranging from observation to full suppression. Currently, fire control in the wilderness is managed under an interim guidance plan until more site-specific plans are written for each wilderness. The interim plan calls for each fire to be evaluated by a resource advisor and incident commander (fire boss) to determine appropriate suppression methods, taking into consideration public safety and wilderness values.

Assumptions

Fire is a natural part of the ecosystem.

Natural and human-caused fires will occur in the Paiute on an irregular and unpredictable basis.

Fire occurrence in the Beaver Dam Mountains Wilderness Area will be insignificant due to sparse vegetation.

Management Policies

Wildfire will be allowed to run its course unless human life, private and other nonfederal property or critical wilderness values are at risk.

The decision to suppress human-caused fires will be done on a case-by-case basis by the authorized officer.

A wilderness resource advisor will be assigned to all fires within the wilderness. Suppression techniques will be those that result in the least impact to the wilderness resource. The minimum tool policy will be used to determine the type of equipment used for fire suppression.

Helicopter operations from the Black Rock heliport will be carried out so as to minimize flying over wilderness. However, at no time will safety be compromised in order to avoid wilderness overflights.

Management Actions

A fire management plan has been written for the Paiute-Beaver Dam Mountains Wilderness Areas. See Appendix C for the Plan.

Insects, Disease and Noxious Plants

Management Objective

The objective is to allow natural insect infestations, disease and noxious plants to play their normal roles in the ecosystem.

Current Situation and Assumptions

Current Situation

Insects, disease and noxious plants occur naturally in all forest types in endemic proportions. In the Paiute-Beaver Dam Mountains Wilderness Area these would include dwarf mistletoe in the juniper and ponderosa pine, mountain pine beetle in the ponderosa and pine needle scale in pinyon pine. There is an infestation of dwarf mistletoe in a stringer of Ponderosa pine along the top of the Virgin Mountains north of Mt. Bangs. It is unlikely that this will spread to other pine stands. These pests also contribute to the ecosystem positively by producing snags for cavity-dwellers and raptors.

Tamerix (salt cedar) is the only known exotic invader that could pose a significant threat to existing resource values. It is a "naturalized" exotic from Eurasia which has become widespread in the southwest along streams and other water sources. It grows along the Virgin River throughout the wilderness and around some of the springs and seeps. *Tamerix* can be detrimental to small water sources by overgrowing the area and eliminating surface flow.

Assumptions

Need for control of insects or diseases will be unlikely.

Tamerix will maintain its population along the Virgin River and will probably spread to springs in the wilderness.

Control of *Tamerix* may be desirable if it invades springs that are important wildlife, livestock or human water sources.

Management Policies

Tamerix invasion of springs in the wilderness will be controlled on an as-needed basis using the minimum tools necessary. Control projects will be approved by the appropriate authorized officer.

Infestations of native insects, disease and noxious plants will be allowed to run their course within the wilderness as natural components of the ecosystem.

Management Actions

Springs and seeps will be inventoried for *Tamerix* invasion.

Where control is deemed necessary, a control plan analyzed through the EA process will be developed.

Information and Education

Management Objective

The information and education objective is to:

1. Promote safety,
2. Promote the use of no-trace camping techniques,
3. Provide wilderness information to all persons requesting it,
4. Promote understanding and appreciation of wilderness, and
5. Obtain user information for guiding future management actions.

Current Situation and Assumptions

Current Situation

All grazing permittees, mining claim holders and rights-of-way permittees have been notified of the wilderness designation and resulting restrictions.

Visitors requesting information on the wilderness areas are presently given a district map (approximately 1:250,000 scale) and a brochure of the old Paiute Primitive Area with an explanation of the change in status. A larger scale (1:62,500) map of the wilderness areas is available.

On-site information and education consists of boundary signs along the outside boundary and along the open roads as well as signs at each end of these roads informing the visitor of the open road with wilderness on both sides. In addition, two displays at the Virgin River Campground include maps of the wilderness and written information. There are currently no signs designating trailheads.

Assumptions

Public requests for information about wilderness will increase.

Conversion of the primitive area to a larger wilderness area will cause some misunderstanding and noncompliance among visitors and other user groups.

Information and education will be important elements in promoting understanding of wilderness and in encouraging appropriate conduct by visitors and users.

Management Policies

BLM will provide information, through offsite means, on wilderness areas, including appropriate wilderness etiquette, no-trace camping techniques and safety considerations.

While information will be made available, wilderness uses will not be advertised or promoted.

Management Actions

An information brochure will be prepared based on the old Paiute Primitive Area brochure and the temporary visitors map.

A sign plan will be written specifying existing and needed signs, locations, and maintenance cycles. Signing will be the minimum necessary to protect the wilderness resource.

The BLM will contact specific resource users (e.g., grazing permittees, mining claimants) to inform them of special considerations required when operating in wilderness.

Scientific Study

Management Objective

Research for scientific, educational or conservation purposes will be conducted in a manner that will preserve the wilderness resource.

Current Situation and Assumptions

Current Situation

The Paiute and Beaver Dam Mountains Wilderness Areas provide numerous opportunities for study and research that requires a natural environment. Because of the several wildlife communities, biological research projects may be requested. Studies have been done on the woundfin minnow in the Virgin River and on bighorn sheep in relation to the recent transplants. Archaeological inventory in the Virgin Gorge has also taken place. Additionally, livestock forage utilization, range trend, mule deer, bighorn sheep and tortoise studies are continuing.

Assumptions

Requests for research in the wilderness areas will be received.

Wilderness management problems will require field research in the wilderness.

Management Policies

BLM will encourage studies that will aid in a better understanding of wilderness elements and their management needs.

All study will be done in a manner consistent with the concept of wilderness preservation.

Study proposals will be evaluated through the EA process using the minimum tool criteria.

Management Actions

Research proposals will be evaluated on a case-by-case basis using the policies listed above.

SPECIFIC UNIT MANAGEMENT OBJECTIVES

West Virgin Unit

Management Objective and Rationale

The objectives for this unit are to maintain or enhance high quality desert bighorn sheep habitat and to maintain or enhance desert tortoise habitat consistent with the concepts of wilderness preservation. The unit consists of the west slope of the Virgin Mountains from Elbow Canyon on the southern boundary to I-15 on the north end. This area is historic desert bighorn habitat. Bighorn populations began to decline around the turn of the century and were believed to have disappeared completely by 1960, primarily due to competition and disease from domestic sheep. In 1974, fresh sheep evidence was documented, resulting in plans to reestablish the bighorn.

Based on a proposal in the Black Rock HMP, twelve bighorns were captured and put into the 700-acre enclosure between Hedricks and Frehner Canyons in November 1979. The population increased to 25 by 1981 and 21 of these were released into the surrounding area. Forty-one additional sheep were transplanted in Sullivan Canyon and around Buck Springs in November 1981. The population is slowly increasing.

Because desert bighorns prefer habitat that is undisturbed and relatively free from human impact, wilderness designation provides protection over and above that provided under normal multiple use management. By managing the unit primarily to maintain and improve its value as bighorn habitat, the wilderness goal of long-term preservation can be realized as well as the complementary wildlife objective of reintroducing a native animal to its historic range.

Desert tortoise habitat is generally found below 3,600 feet in the West Virgin Unit and the Virgin Gorge Unit. Wilderness designation is expected to provide an extra measure of protection for the habitat.

Management Policies

New improvements for livestock will be discouraged unless there is a clear benefit to the wilderness resource.

Desert tortoise habitat in the lower elevations will be managed under the guidelines in the Virgin River-Pakoon Basin HMP, consistent with wilderness management policies.

Use of motorized vehicles and equipment for range and wildlife habitat improvement maintenance will be minimized.

Any new wildlife water development proposals will be analyzed through the EA process. Proposed developments must be found to be compatible with preservation of wilderness character.

Emphasis will be placed on accomplishing habitat management activities through nonmotorized means.

See Part IV, page 8, for aircraft use policies.

Management Actions

Selected riparian areas will be identified and monitored to determine future management actions that may be needed to prevent degradation or improve existing conditions.

The sheep enclosure will be reevaluated in FY 91 to determine its value and continued compatibility with wilderness values. Recommendations will be made at that time as to removal or continuance. In the interim, proposed maintenance will be subject to the minimum tool policy.

Virgin Gorge Unit

Management Objective and Rationale

The objective is to preserve and, where possible, enhance the visual resource while allowing other wilderness-oriented as well as nonconforming but accepted uses to continue.

The Virgin Gorge was formed by extreme geologic faulting and folding, producing an area of high quality scenery as well as recreational opportunities and excellent bighorn sheep habitat. Thousands of travelers each year are able to take advantage of this unique opportunity to view wilderness lands from an interstate highway.

The gypsum mine described in the minerals section is found in this unit.

The unit's desert tortoise habitat is along the lower slopes of the Beaver Dam Mountains. There is also considerable evidence that tortoise inhabit the Virgin River Gorge as well. The gorge is also considered superior peregrine falcon habitat, although none have been reported in the area. Annual surveys for this endangered species are proposed in the Virgin River-Pakoon Basin HMP to assess the rate of peregrine falcon population recovery on the Arizona Strip.

An access road through the I-15 highway right-of-way fence approximately ½ mile east of the rest stop on the south side of the highway provides access to a livestock corral used by three grazing permittees. The gate in the highway fence is normally locked but has been broken on numerous occasions.

All of the Beaver Dam Mountains Wilderness is in this unit. Wildlife management in the Utah portion is covered by the Beaver Dam Slope HMP. No actions are currently proposed in the wilderness under this HMP.

Management Policies

New improvements for livestock will be discouraged unless there is a clear benefit to the wilderness resource.

Any new wildlife water development proposals will be analyzed through the EA process. Proposed developments must be found to be compatible with preservation of wilderness character.

Bighorn sheep habitat maintenance or enhancement will be given consideration, subject to preservation of the scenic resource.

Desert tortoise habitat will be managed in accordance with the guidelines in the Virgin River-Pakoon Basin HMP, consistent with wilderness management policy.

Peregrine falcon survey methods will be based on the minimum tool policy.

The Virgin River is considered habitat for the endangered woundfin minnow and Virgin River chub. Maintaining the appropriate flow for these species will receive priority.

T&E species monitoring and management actions will be conducted as needed in accordance with the Endangered Species Act and wilderness management policies.

Regulations pertinent to mining operations (43 CFR 3809 and 8560) will be strictly enforced. An appropriate bond will be required for all approved mining operations.

Hiking, backpacking, river running and other appropriate recreational activities will be allowed to continue unregulated unless these activities begin to impact negatively on the scenic and other wilderness resources.

See Part IV, the Minerals section, for policies and actions on the gypsum mine.

Management Actions

The visual resource, including air quality, in the Virgin Gorge will be monitored and appropriate action taken to protect it.

Wilderness information will be posted on the display boards at the Virgin River Campground. Information will include maps, general descriptions, and minimum impact camping techniques.

The gate for the corral access road east of the rest stop will be reinforced and locked to prevent unauthorized motor vehicle use. Uses will be predetermined in accordance with Appendix B procedures for maintenance plans.

Black Rock Unit

Management Objective and Rationale

The objectives for this unit are to maintain or enhance opportunities for wilderness oriented recreation and to provide good to excellent mule deer habitat.

This area of mountain shrubs, gambel oak thickets and ponderosa pine is important summer mule deer range. The Black Rock road, designated to remain open, provides access for hunters, campers and sightseers. Some of the numerous spur roads, now closed to vehicle travel, can serve as trails but will need to be blocked off to prevent vehicle violations. Existing unimproved trailheads for getting into the Sullivan Canyon area are also in this unit.

The Black Rock HMP calls for mule deer habitat management through water catchments and small prescribed burns to improve browse conditions in the gambel oak and mountain shrub areas. Three water catchments have been installed with another proposed along the crest of the Virgin Mountains. Other catchments may be proposed in the future.

Management Policies

All proposed activities must be consistent with the intent of wilderness designation.

Existing roads or ways, now closed to vehicles, will be blocked by appropriate means. Physical barriers should be unobtrusive and the minimum necessary to prevent access.

Wildlife habitat management proposals such as catchments or prescribed burns will be analyzed for wilderness compatibility or enhancement through the EA process. Prescribed burning may be done only for the following purposes:

- It is needed to maintain the natural condition of a fire-dependent ecosystem or to reintroduce fire where past strict wildfire control measures have interfered with natural ecological processes.
- It will sustain a primary value of a given wilderness.
- It will promote the perpetuation of a threatened or endangered species.

BLM will provide information to deer hunters each year concerning wilderness boundaries, closed roads and campsites. Camping outside the wilderness will be emphasized.

Management Actions

Campsites in the wilderness will be analyzed to determine if they are compatible with wilderness.

BLM will inventory spur roads and ways and determine appropriate vehicle barriers.

A hunter information station will be set up each year two days prior to opening day of the deer hunt.

Sullivan Canyon Unit

Management Objective and Rationale

The unit objective is to provide opportunities for solitude and primitive and unconfined recreation with a minimum of regulation.

This area is the "inner core" of the Paiute Wilderness. Remote, with little evidence of human intrusion, it provides excellent opportunities for wilderness oriented recreation. Access is provided at the head of the canyon by an old bulldozer trail and at the bottom by hiking from the Virgin River Campground. This lower access point is limited to certain times of the year because of the necessity of fording the Virgin River. A few springs in the upper part of the canyon provide water but the greater portion is quite dry.

Management Policies

Maintenance of existing improvements will generally be by primitive, nonmechanized means. Proposals for motorized vehicle use (e.g., helicopters) will be analyzed through the EA process.

Efforts will be made, through off-site means, to inform visitors of the necessity for water treatment.

New improvements for any purpose will be evaluated through the EA process. If approved, use of on-site natural materials and nonmechanized methods will be emphasized.

Management Actions

Water treatment and other safety information will be included on new wilderness brochures and posted on displays at the Virgin River Campground.

Trails and trailheads will be inventoried and determinations made on the need for maintenance or improvements. If actions are proposed involving surface disturbance, the proposal will be analyzed through the EA process.

Coves Unit

Management Objectives and Rationale

The objective for this unit is to maintain or enhance the wilderness resource with no single element receiving emphasis.

This southeastern part of the Paiute Wilderness receives little use by visitors except for occasional deer hunters in the fall.

Most use is from cattle grazing operations on one grazing allotment that covers the majority of the area. Wilderness recreation opportunities are quite good because of the low use and limited access. There is some evidence of archaeological resources although no inventory of the area has been done. The area also provides significant deer winter habitat.

Management Policies

Proposed new improvements will be analyzed through the EA process.

Management Actions

Actions will be taken as needed to protect the wilderness resource.

PART V

IMPLEMENTATION SEQUENCE

Management Action	Target Date	Responsibility
A patrol and monitoring record is being maintained and includes documentation of monitoring trips and all authorized or unauthorized activities. See Part IV, Administration section.	Ongoing	All BLM personnel
Administrative boundary signs or road closure signs will be placed at appropriate locations. Signs will be visible but unobtrusive. See Part IV, Administration section.	Ongoing	Dixie and Shivwits Resource Area Recreation Specialists
River running will be monitored to prevent any resource damage. See Part IV, Recreation section.	Ongoing	Dixie and Shivwits Resource Area Recreation Specialists
Existing information and boundary signs will be maintained and additional signs installed where necessary. Signing will be the minimum necessary. See Part IV, Information and Education section.	Ongoing	Dixie and Shivwits Resource Area Recreation Specialists
Monitoring studies, including utilization, trend, actual use, livestock counts and precipitation data gathering will be continued. See Part IV, Grazing Management section.	Ongoing	Shivwits Resource Area Range Conservationists
Inactive mining claims will be monitored quarterly to check for unauthorized surface disturbance. See Part IV, Minerals section.	Ongoing	Dixie and Shivwits Resource Area Mineral Specialists
The BLM will contact specific resource users (e.g., grazing permittees, mining claimants) to inform them of special considerations required when operating in wilderness. See Part IV, Information and Education section.	Ongoing	Area Managers
The visual resource, including air quality, in the Virgin Gorge will be monitored and appropriate action taken to protect it. See Part IV, Specific Unit Measurement Objectives section, Virgin Gorge Unit.	Beginning in FY 89 and continuing	Shivwits Resource Area Recreation Specialist
Water quality and flow on the Virgin River will be monitored by analyzing data from the Woundfin Recovery Team and existing flow gauges. See Part IV, Water section.	Ongoing	Dixie and Shivwits Resource Area Recreation Specialists
Quantification of instream flows and application for Arizona instream water rights will be completed for the Virgin River. See part IV, Water section.	9/30/92	Arizona Strip District Manager
Springs will be periodically monitored for contamination and pollution. Special emphasis will be placed on those springs that are used by recreationists. See part IV, Water section.	Beginning in FY 87 and continuing	Shivwits Resource Area Recreation Specialist

IMPLEMENTATION SEQUENCE

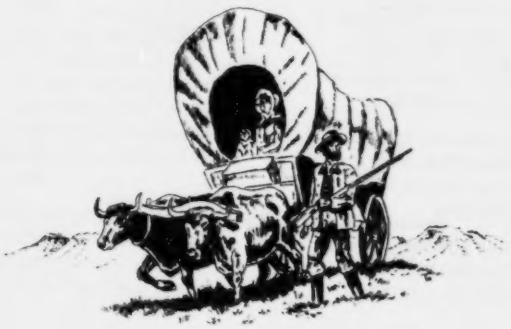
Management Action	Target Date	Responsibility
BLM has notified all ROW permittees of the change in land status and is coordinating with these permittees on maintenance needs and use of motorized vehicles or equipment. See Part IV, Lands and Realty section.	As needed	Area Managers
Research proposals will be evaluated on a case-by-case basis using the policies listed above. See Part IV, Scientific Study section.	As needed	Area Managers
The Cedar Pockets gypsum mine will be monitored bi-weekly during periods of operation to insure compliance with the approved plan of operations. See Part IV, Minerals section.	As needed	Shivwits Resource Area Minerals Specialist
Annual coordination meetings will be held with all affected permittees to review and update the planned maintenance schedule. See Part IV, Grazing Management section.	Annually	Area Managers
Annual meetings with AGFD and BLM wildlife and wilderness specialists will continue in order to coordinate wildlife management functions in the wilderness. See Part IV, Wildlife section.	Annually	Area Managers
The Shivwits Resource Area will continue to set up a hunter information station prior to the opening day of deer season to provide information on wilderness. See Part IV, Recreation section and Specific Unit Management Objectives, Black Rock Unit section.	Annually	Shivwits Resource Area Recreation and Wildlife Specialists
Validity examinations. See Part IV, Minerals section (Management Policy).	When a plan of operation or patent application is received	District Managers
Wilderness information will be posted on the display boards at the Virgin River Campground. Information will include maps, general descriptions, and minimum impact camping techniques. See Part IV, Specific Unit Measurement Objectives, Virgin Gorge Unit section.	Completed	Shivwits Resource Area Recreation Specialist
Water treatment and other safety information will be posted on displays at the Virgin River Campground. See Part IV, Specific Unit Measurement Objectives, Sullivan Canyon Unit section.	Completed	Shivwits Resource Area Recreation Specialist
The Arizona Strip and Cedar City districts will submit boundary maps and descriptions to the Arizona and Utah BLM state offices for review and approval. This task will be done in cooperation with the Cedar City District and will be submitted with the final Wilderness Management Plan. See Part IV, Administration section.	9/30/90	District Managers
BLM will take appropriate measures, which could range from signs to physical barriers, to eliminate access on roads and ways closed by wilderness designation. See Part IV, Administration section.	Completed	Area Managers

IMPLEMENTATION SEQUENCE

Management Action	Target Date	Responsibility
The gate for the corral access road east of the rest stop will be reinforced to prevent unauthorized motor vehicle use. See Part IV, Specific Unit Measurement Objectives, Virgin Gorge Unit section.	Completed	Shivwits Resource Area Recreation Specialist
Campsites in the wilderness will be analyzed to determine compatibility with wilderness. See Part IV, Specific Unit Measurement Objectives, Black Rock Unit section.	9/30/92	Shivwits Resource Area Recreation Specialist
The BLM will contact the owner of the private inholding to initiate exchange or purchase proposals. See Part IV, Lands and Realty section.	Underway	Shivwits Area Manager
The BLM will continue exchange proceedings with the state of Utah. See Part IV, Lands and Realty section.	Underway	Cedar City District Manager
BLM will inventory spur roads and ways and determine appropriate vehicle barriers. See Part IV, Specific Unit Measurement Objectives, Black Rock Unit section.	Completed	Shivwits Resource Area Recreation Specialist
Existing structures will be inventoried and, if found to be abandoned and of no historical significance, may be removed. See Part IV, Administration section.	9/30/93	Area Managers
Existing trails and trailheads will be inventoried and monitored to determine the need for trailhead maintenance or improvement. See Part IV, Recreation section and Specific Unit Measurement Objectives, Sullivan Canyon Unit section.	Begin by 9/30/92	Shivwits Resource Area Recreation Specialist
A sign plan will be done, specifying existing and needed signs, locations and maintenance cycles. See Part IV, Information and Education section.	9/30/92	Shivwits Resource Area Recreation Specialist
Selected riparian areas will be identified and monitored to determine future management actions that may be needed to prevent degradation or improve existing conditions. See Part IV, Specific Unit Measurement Objectives, West Virgin Unit section.	Begin by 9/30/92	Shivwits Resource Area Wildlife Biologist and Range Conservationists
Those portions of the revised Black Rock and Virgin River-Pakoon Basin HMPs dealing specifically with proposed actions will be reviewed and amended, if necessary, to be consistent with wilderness goals. See Part IV, Wildlife section and Specific Unit Measurement Objectives, West Virgin Unit section.	Next scheduled HMP revisions	Arizona Strip District and Shivwits Resource Area Wildlife Biologists
Riparian habitats will be inventoried to determine the condition of specific areas and, if necessary, proposals for protection will be made. See Part IV, Wildlife section.	9/30/91	Shivwits Resource Area Wildlife Biologist and Range Conservationists
Existing allotment management plans (AMPs) are being revised to reflect wilderness management policies. See Part IV, Grazing Management section.	9/30/90	Shivwits Resource Area Range Conservationists

IMPLEMENTATION SEQUENCE

Management Action	Target Date	Responsibility
Maintenance plans for improvements within wilderness will be incorporated into existing and any new AMPs and made a part of each grazing permit. See Part IV, Grazing Management section.	Completed	Shivwits Resource Area Range Conservationists
Springs and seeps will be inventoried for Tamarix invasion. See Part IV, Insects, Disease and Noxious Plants section.	9/30/92	Shivwits Resource Area Wildlife Biologist and Range Conservationists
An information brochure will be prepared based on the old Paiute Primitive Area brochure and the temporary visitors map. Information regarding laws that protect cultural resources will be included. See Part IV, Information and Education section and Cultural Resources section.	9/30/92	Shivwits Resource Area Recreation Specialist
A fire management plan has been written for the Paiute-Beaver Dam Mountains Wilderness Areas. See Part IV, Wildfire section and Appendix C.	Completed	Arizona Strip District Fire Management Officer and Shivwits Resource Area Recreation Specialist
An inventory of all range improvements within the wilderness is being completed. Improvements which have been abandoned or are determined to be unnecessary to the grazing operation may be removed. See Part IV, Grazing Management section.	Completed	Shivwits Resource Area Recreation Specialist and Range Conservationists
The LAC monitoring plan will be developed cooperatively by the Shivwits and Dixie Resource Areas. Field studies will be done cooperatively by the Shivwits and Dixie Resource Areas. See Part IV, Administration section.	9/30/94	Area Managers
The sheep enclosure will be reevaluated in FY 91 to determine its value and continued compatibility with wilderness values. Recommendations will be made at that time as to removal or continuance. See Part IV, Specific Unit Management Objectives, West Virgin Unit section.	9/30/91	Arizona Strip District and Shivwits Resource Area Biologists in Cooperation with AGFD.



APPENDIX A

ENVIRONMENTAL ASSESSMENT

INTRODUCTION

The Paiute and Beaver Dam Wilderness Areas were designated upon the passage of the Arizona Wilderness Act of 1984.

A draft environmental impact statement (EIS) was prepared in April 1980, and analyzed the environmental, social and economic impacts of designating the Paiute Primitive Area as Wilderness. Several other management plans and EAs have been written on all or parts of the wilderness covering the prewilderness management issues. All of those documents are available at the Arizona Strip and/or Cedar City District Office.

Several management actions [e.g., hunter information station prior to the opening day of deer season cited in the Wilderness Management Plan (WMP)] have not been evaluated in this EA because they do not have adverse environmental, social or economic impacts on the wilderness resources, wilderness users or to the local area. Generally, the alternatives to these actions not brought forward to the EA would be no action.

Impacts to the environment are evaluated in comparison to conditions existing at the time of passage of the Arizona Wilderness Act.

PURPOSE AND NEED

To guide management of these areas a wilderness management plan has been prepared which sets forth the Bureau of Land Management's (BLM) proposed management objectives, policies and actions. This environmental assessment (EA) has been written to identify, document and analyze the environmental, social and economic impacts of the proposed wilderness management plan (WMP) and various alternative management strategies.

The framework for wilderness management is provided by the Wilderness Act of 1964, the Arizona Wilderness Act of 1984, Congressional guidelines, regulations and BLM Manual sections. Management of this wilderness area is unusually complex because of a mixture of exceptional natural values, recreational use and a number of established and recognized nonconforming but acceptable uses, some of which would require use of motorized vehicles or mechanized equipment. As a result, specific procedures must be developed to guide how wilderness preservation requirements, the rights of existing but nonconforming uses, levels and types of recreation use and other needs can be balanced in accordance with established laws and regulations.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Four alternative management proposals are being considered. It is important to note that the Decision Record to be prepared for this plan may select individual elements or modifications based on public comment and not necessarily any one alternative entirely. Table 3 highlights the alternatives to facilitate comparison. Table 4 compares impacts by resource.

Proposed Action Alternative

The Proposed Action Alternative favors wilderness preservation, with special emphasis on protecting naturalness, scenic quality, solitude and primitive unconfined recreation while recognizing and providing for nonconforming but acceptable uses. It is envisioned that the implementation of this alternative would result in moderate improvement in wilderness quality over prewilderness conditions.

The Proposed Action Alternative consists of the Management Policies and Management Actions that are presented in Part IV of the Wilderness Management Plan. This is the Bureau's proposed action which reflects policies and public inputs.

APPENDIX A

TABLE 3

COMPARISON CHART OF ALTERNATIVES

Bureau of Land Management, Arizona Strip District

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
ADMINISTRATION			
Motorized vehicle or equipment use in **non-emergency** situations for administration purposes	Motorized vehicle or equipment use for non-emergency administrative purposes would not occur.	Motorized vehicles/ mechanized equipment could be used for non-emergency administrative purposes where used prior to wilderness designation following EA and minimum tool criteria review.	Same as Proposed Action.
Limits of Acceptable Change monitoring process	Same as Proposed Action.	Interim monitoring plan followed by LAC would be used to monitor change and regulate management actions.	LAC would not be used. Existing monitoring techniques would be continued.
Signing	Same as Proposed Action.	Signing would include boundaries and special wilderness protection applications.	Same as Proposed Action with additional signing to enhance uses such as trailheads, trail routes, water, etc. added for public convenience and safety.
Management Unit Concept	Same as Proposed Action.	Implement Management Unit concept as described in Part IV-B of management plan.	No Management Unit concept. Future decisions on a case-by-case basis.
Aircraft Use (BLM and other agencies)	Non-emergency helicopter landings would not be approved. Low level flights would not be conducted by BLM and discouraged by other agencies.	BLM would evaluate proposals for non-emergency helicopter landings and low level flights considering minimum tool criteria and impacts or benefits to wilderness values. All landings require EA.	Low level flights and helicopter landings could be used for non-emergency administrative purposes where used prior to wilderness designation following EA and minimum tool criteria review.
Abandoned Improvements and Disturbed Sites	Remove all abandoned improvements that are reasonably accessible. Rehabilitate all disturbed areas that may occur or result from improvement removal.	Remove selected abandoned improvements based on accessibility and degree of unnaturalness. Rehabilitate selected disturbed areas that may occur or result from abandoned improvement removal.	Allow abandoned improvements to deteriorate naturally.

APPENDIX A

TABLE 3 (Continued)

COMPARISON CHART OF ALTERNATIVES

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
RECREATION			
Trail Management	Abandon existing trail[1] system. Conduct rehabilitation on portions (if necessary) to improve wilderness quality.	Conduct no trail[1] construction or maintenance of existing system for recreation purposes except to protect wilderness values.	Continue past designated trail system. Provide maintenance or improvement for safety purposes if use or demand warrants.
Trailheads/Parking	Provide no designated trailheads or improved parking on or adjacent to wilderness areas.	Provide minimum parking outside wilderness areas near traditional trailheads. Provide no trailhead improvements or parking in wilderness except to protect wilderness values.	Provide improved park-outside or within WAs adjacent to cherry stem roads with continued formal trailhead designations.
GRAZING MANAGEMENT			
Management Planning	Incorporate wilderness management techniques into present AMPs and licenses. Do not prepare new AMPs. Use grazing management techniques that do not require intense systems or new improvements on present non-AMP allotments to improve natural soil vegetation and water values.	Incorporate wilderness management constraints into existing or new AMPs and into licenses on non-AMP allotments. Continue managing with both AMP and non-AMP grazing management intensities to improve wilderness values.	Incorporate wilderness management constraints into existing and new AMPs. Complete AMPs for present non-AMP allotments designed for minimum improvement implementation.
New Improvements	No new improvements.	New range improvements considered, after appropriate EA review, that have clear potential for specific resource protection resulting in wilderness quality enhancement. New improvements would be discouraged in Management Units 1, 2, and 4.	Improvements considered to implement AMPs and grazing management (but not capacity) and maintain present wilderness qualities over entire wilderness areas after appropriate EA review and approval.
Range Improvement Inspection and Maintenance	No alternative.	Follow congressional guidelines for inspection and maintenance as outlined in Appendix B of the management plan. May involve motorized vehicles/equipment.	No alternative.

APPENDIX A

TABLE 3 (Continued)

COMPARISON CHART OF ALTERNATIVES

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
WILDLIFE			
Riparian Habitat Monitoring	Same as Proposed Action.	Selected key riparian areas would be monitored and results used to direct management actions to improve quality.	No riparian monitoring except as may result from existing studies or casual observations
Motorized Improvement Inspection and Maintenance	Same as described under ADMINISTRATION-Motorized Vehicles.	Same as described under ADMINISTRATION-Motorized Vehicles.	Same as described under ADMINISTRATION-Motorized Vehicles.
New Improvements	No new improvements.	New improvements considered after EA review that have clear potential for specific wilderness quality enhancement. New improvements would be discouraged in Units 1, 2 and 4 or designed to be compatible with the unit's major values.	Improvements considered to implement HMPs and improve wildlife quantity or diversity throughout both wilderness areas. Proposals must meet EA review and minimum tool criteria.
MINERALS			
Bonding	Same as Proposed Action.	Require bonding sufficient to cover expected reclamation prior to commencement of operations.	Require bonding only after prior notice of non-compliance.
Monitoring	Maintain frequent contact with claimants. Visit dormant claims monthly and operating claims weekly to prevent or detect unauthorized actions.	Maintain periodic contact with claimants. Visit dormant claims quarterly and operating claims biweekly to prevent or detect unauthorized actions.	Visit dormant claims annually and operating claims quarterly to prevent or detect unauthorized actions.
LANDS AND REALTY			
Motorized Right-of-Way Inspection and Maintenance	Same as Proposed Action.	Non-emergency use of motor vehicles may be approved by the authorized officer following EA.	Same as Proposed Action.
Monitoring	Maintain frequent contact with ROW holders and lessees. Visit improvements monthly to prevent or detect unauthorized actions.	Maintain periodic contact with ROW holders and lessees. Visit improvements quarterly to detect or prevent unauthorized actions.	Visit improvements annually to prevent or detect unauthorized actions.
Private and Utah State Inholdings	Same as Proposed Action.	Contact owners and the State of Utah and pursue acquisition through voluntary purchase or exchange.	Same as Proposed Action.

APPENDIX A

TABLE 3 (Continued)

COMPARISON CHART OF ALTERNATIVES

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
WATER			
Water Rights	Same as Proposed Action except file for water rights on all unappropriated sources.	File for water rights on selected unappropriated sources important to maintain wilderness character under State law. Oppose requests for private control of waters.	Same as Proposed Action except do not oppose private applications on non-critical waters.
Water Quality	Intensively monitor recreational water sources.	Monitor selected springs that may be consumed by users for contaminants. Also monitor Virgin River water quality.	No water quality monitoring.
WILDFIRE			
	Same as Proposed Action.	See fire management plan (Appendix C), wildfire would be allowed to burn except protection provided for life, property and critical wilderness values. Suppression techniques would be those that result in the least impact to the wilderness resource.	Same as Proposed Action.
INFORMATION/EDUCATION (also see Signing)			
	Public information limited to map and wilderness preservation oriented information provided to inquiries. User safety information limited to serious hazards, if any.	Provide non-promotional information such as maps, brochure, no trace camping, wilderness etiquette, etc. structured to wilderness preservation and public safety on an as requested basis.	Same as Proposed Action except information more promotional in nature to include use opportunities, interpretations, trails, camping, parking along with more emphasis on user safety. To be disseminated to wider audiences on an opportunistic basis.

Source: Arizona Strip District

[1] Some of these trails are range improvements and may be maintained for livestock access purposes under Appendix B processes.

APPENDIX A

TABLE 4

COMPARISON CHART OF IMPACTS

Bureau of Land Management, Arizona Strip District

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
ADMINISTRATION			
Motorized vehicle or equipment use in **non-emergency** situations for administrative purposes	No violations of solitide. Soil and vegetation not subject to compaction or disturbance. Natural healing of access routes as fast as naturally possible.	Number of trips and access routes used substantially less than pre-wilderness condition with commensurate reduction in soil compaction, vegetation damage, and improved solitude. Natural healing of used routes at a moderate rate, but never complete healing. Unused routes heal as fast as naturally possible.	Number of trips and access routes used somewhat less than pre-wilderness with soil compaction and vegetation damage on used routes. Healing on a few unused routes as rapid as naturally possible.
Limits of Acceptable Change Monitoring Process	Same as proposed action.	Protection and improvement of natural values accelerated from pre-wilderness condition.	Some possible protection or improvement forgone from lack of monitoring plan and attendant baseline and trend information.
Signing	Same as proposed action.	More signs than the pre-wilderness condition could detract from naturalness and solitude, but provide protection to wilderness values.	Substantially more signs than the pre-wilderness condition to detract from solitude and naturalness. Signs could provide wilderness protection, public safety and convenience.
Management Unit Concept	Same as proposed action.	More precision in management direction for different parts of the wilderness areas.	Benefits of more detailed management direction forgone. Latitude for decision on a case-by-case basis may cause loss in management consistency.
Aircraft Use (BLM and Other Agencies)	No compromise of solitude. Loss of potential benefits described in proposed action.	Some disturbance of solitude and naturalness, but less than pre-wilderness condition. Benefits to bighorn sheep management, wilderness value protection from wildfire or improvement removal.	Less disturbance of solitude than pre-wilderness situation, but more than proposed action. Benefits to fire control and bighorn sheep management.
Abandoned Improvements/ Disturbed Sites	Greater naturalness over long term, but also greater short term losses of solitude from motorized equipment.	Long term benefits to naturalness. Short term loss of solitude during removal or removal rehabilitation operations.	Slow improvement in naturalness from pre-wilderness. No loss of solitude from removal operations.

APPENDIX A

TABLE 4 (Continued)

COMPARISON CHART OF IMPACTS

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
RECREATION			
Trail Management	Accelerated improvement in naturalness. Possible negative impacts to livestock movements and visitor convenience and safety.	Natural trail healing. Less impacts to solitude and naturalness. Some risks in visitor safety on unmaintained trails.	Naturalness the same as pre-wilderness condition. Solitude disrupted during maintenance operations. Added visitor safety.
Trailheads/Parking	Insignificant negative impacts to visitor convenience. Maintenance of pre-wilderness natural condition.	Some negative impact to wilderness areas and some unnaturalness on adjacent lands by parking and trailhead facilities. Visitor convenience improved slightly.	Visitor convenience improved over pre-wilderness condition. Some loss of naturalness on both wilderness and non-wilderness lands.
GRAZING MANAGEMENT			
Management Planning	Same as proposed action except ecosystem improvement over a longer term. Greater management efforts and social/economic impacts on ranchers over pre-wilderness condition.	Overall improvement in natural ecosystem over pre-wilderness conditions by improved grazing management.	More rapid and effective improvement in ecosystem over pre-wilderness conditions. Would present greater need for new range improvements.
New Improvements	No new improvements. Solitude and naturalness maintained.	New improvements considered that meet Congressional guidelines. No new grazing management improvements considered in Management Units 1 and 2. Some losses of solitude and naturalness in trade-off for improvement in natural ecosystem conditions.	New improvements considered that meet Congressional guidelines in greater magnitude than proposed action. No new grazing management improvements considered in Management Units 1 and 2. Potentially more rapid and significant ecosystem improvements in trade-off for greater losses in solitude and naturalness.
Range Improvement Inspection and Maintenance	Same as proposed action.	Site-specific EAs to be prepared independently from this document.	Same as proposed action.
WILDLIFE			
Riparian Habitat Monitoring	Same as proposed action.	Data collected used to direct management actions. Any resultant management changes may improve ecosystems and could be to the detriment of livestock grazing.	Possible forfeiture of management decision data with possible less than desirable riparian ecosystem management.

APPENDIX A

TABLE 4 (Continued)

COMPARISON CHART OF IMPACTS

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
WILDLIFE (Cont.)			
Improvement Maintenance	Same as proposed action.	Same as described under ADMINISTRATION-Motorized Vehicle/ Equipment.	Same as proposed action.
New Improvements	Solitude, naturalness, and visual qualities maintained. Some loss of abundance or diversity opportunity.	Benefits to abundance and diversity of wildlife and resultant visitor enjoyment or hunting. Some losses in solitude and naturalness and visual values compared to pre-wilderness situation.	Same as described by proposed action except of greater magnitude.
MINERALS			
Bonding	Same as proposed action.	Slight potential for negative economic impact to operator. Positive impact in assurance of reclamation of disturbed sites and avoiding risks of no reclamation or delays in reclamation.	Beneficial impact to operator. High risks of delayed or non-compliance with reclamation terms.
Monitoring	Higher degree of surveillance give more assurance of compliance by claimants.	Prevents undue, unnecessary or inadvertent disturbances or degradation of wilderness character.	Same as proposed action but to a lesser degree. Potential for unauthorized action and surface disturbance would be greater than proposed action but less than pre-wilderness situation.
LANDS AND REALTY			
Motorized Right-of-Way Maintenance and Inspection	Same as proposed action.	Sixty-day notice to BLM with impacts evaluated in site-specific EA.	Same as proposed action.
Monitoring	Same as described for Minerals Monitoring.	Same as described for Minerals Monitoring.	Same as described for Minerals Monitoring.
Private Inholding	Same as proposed action.	Positive impact to wilderness. Positive or neutral economic impact to owner.	Same as proposed action.
WATER			
Water Rights	All water sources protected. Possible negative social perception re: federal control and positive ones on water source protection.	Important waters protected to maintain wilderness character. Potential for private water use diminished.	Selected waters protected. Some loss of management options through additional private control of waters.

APPENDIX A

TABLE 4 (Continued)

COMPARISON CHART OF IMPACTS

Wilderness Elements	Wilderness Quality Emphasis Alternative	Proposed Action Alternative	Wilderness Quality Maintenance
WATER (Cont.)			
Water Quality Monitoring	Added quality data to manage wilderness ecosystems and for visitor safety. Losses of solitude by sample collection process.	Quality data on important waters for use in management improvement. Some loss of solitude.	Lack of information for LAC uses in wilderness management. Solitude same as pre-wilderness condition.
INFORMATION/EDUCATION (Also see Signing)			
	Visitor safety risks increased over proposed action but similar to pre-wilderness conditions tend to limit visitors and thus human impacts.	Insignificant effects on wilderness. Protect wilderness values from human traces. Provide some protection for visitors consistent with a degree of reasonable visitor risk.	Greater visitor attraction than pre-wilderness. Decreased risks to wilderness visitors.

Source: Arizona Strip District

Wilderness Quality Emphasis Alternative

The Wilderness Quality Emphasis Alternative provides that where regulations and policies have latitude for management discretion, decisions would favor naturalness, pristine qualities, increased available solitude and natural ecosystem dynamics.

Wilderness area protection would take precedence over other wilderness uses such as recreation or nonconforming but acceptable uses. This alternative would be the most restrictive on wilderness users and would require greater management intensity to implement. Implementing this alternative would result in achieving highest reasonable improvement in wilderness quality compared to prewilderness conditions.

Wilderness Quality Maintenance Alternative

The Wilderness Quality Maintenance Alternative allows interpretation of wilderness regulations and policies that have latitude for management discretion to favor opportunities for both conforming and nonconforming but acceptable uses.

This alternative would maintain wilderness quality at or above the prewilderness condition, but apply the least user restriction and envisions lesser management intensity.

No Action Alternative

The No Action Alternative consists of a continuation of management recommendations as described in the Shivwits Management Framework Plan (MFP). The consequences of this have been analyzed in the Draft and Preliminary Final Arizona Strip Instant Study Area EIS (1980 and 1984) and the Draft EIS on the Arizona Strip Wilderness Study Areas (1982).

The No Action Alternative is not a viable alternative because the area has been legislatively designated as wilderness and must be managed as such. It will not be analyzed further.

A complete description of the Proposed Action Alternative is presented in Part IV of the Wilderness Management Plan.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

The Paiute Wilderness Area is a designated 84,700-acre wilderness area located in Mohave County in extreme northwestern Arizona. It consists of the south side of the Virgin River Gorge, portions of the Virgin Mountains and Black Rock Mountain with adjacent drainages, benchlands and coves.

The Beaver Dam Mountains Wilderness Area is adjacent to the Paiute Wilderness Area. It has 19,600 acres in both Mohave County, Arizona and Washington County, Utah. It consists of the north slopes of the Virgin River Gorge and the southern end of the Beaver Dam Mountains. Detailed descriptions of these environments are provided in Part I, Location and Description section, of the Wilderness Management Plan.

ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES

Assumptions

The analysis of impacts is based on the following assumptions.

1. Each alternative is analyzed as if it were a fully funded action and would be implemented with all necessary personnel.
2. Implementation of the management plan would begin in 1990.
3. The short-term period would be 5 years; long-term is greater than 5 years.
4. Site impacts from any proposed actions that are not specifically projected in the WMP would be analyzed by an Environmental Assessment in accordance with NEPA regulations.
5. The base against which the impacts of the proposed action and alternatives are judged is the conditions existing at the passage of the Arizona Wilderness Act on August 28, 1984.

Environmental Impacts

Anticipated Impacts - This section evaluates the actions and policy statements in the Wilderness Management Plan and the viable alternatives to those actions. This section is arranged in similar sequence to the Wilderness Management Plan to facilitate comparisons with the Proposed Action Alternative.

Administration

Motorized Vehicle/Equipment Use in Nonemergency Situations For Administration and Other Uses

Proposed Action Alternative

Any proposal would be reviewed in a site-specific EA including minimum tool review prior to approval or disapproval.

Wilderness Quality Emphasis Alternative

Under this alternative motor vehicles or motorized equipment would not be used for nonemergency administrative purposes in either wilderness area. There would be natural healing of all trails with beneficial impacts to soils, vegetation, visual resources, wildlife, and solitude values compared to the prewilderness condition. Access would require walking or horseback travel to meet administrative needs such as range or wildlife studies or wilderness monitoring (LAC).

Wilderness Quality Maintenance Alternative

Any proposal would be reviewed in a site-specific EA including minimum tool review prior to approval or disapproval.

Limits of Acceptable Change (LAC) Process

Proposed Action Alternative

Utilizing existing monitoring and ultimately the LAC monitoring process as described would have long-term benefits to wilderness management

with a slight potential for negative changes before implementation can take place (see Part III, Management Strategy). Use of the additional baseline data acquired over two years and subsequent change determinations would provide long term management information directed toward meeting the stated goals and management actions.

Since changes are very slow and human uses light, the potential for interim undetected impacts is slight.

There would be a potential short-term adverse impact using this approach from either applying the LAC indicator too broadly or not using the appropriate standard to direct management in a specific setting.

Wilderness Quality Emphasis Alternative

Same as Proposed Action Alternative.

Wilderness Quality Maintenance Alternative

Under this alternative BLM would not develop additional monitoring or use the LAC process, but would continue to monitor those areas that were established prior to wilderness designation. Under this alternative many wilderness values would not be monitored. There would be a potential negative impact from not having a comprehensive wilderness monitoring plan. Adverse impacts to wilderness values could occur without prior knowledge. The current monitoring program is activity driven (i.e. range utilization for AMP objectives). This would adversely affect BLM's ability to manage wilderness.

Signing

Proposed Action Alternative

Under this alternative signs would be placed to mark wilderness boundaries, including marking roads and trails to be closed. Other signs would be placed to provide protection to specific sites or resources.

Most signs would be on or near boundaries and access roads. There would be more signs than in the prewilderness condition which would tend to detract from naturalness and solitude in a wilderness setting and serve as reminders of man's influence creating a negative impact.

Wilderness Quality Emphasis Alternative

Same as Proposed Action Alternative.

Wilderness Quality Maintenance Alternative

This alternative would provide signs for wilderness protection, human safety as well as markings for used areas such as trail heads, trail routes, parking areas, water locations. This would add to public safety and convenience over the proposed action. It would also reduce risks of using the wilderness area. There would be substantially more signs than under the prewilderness condition and these additional signs would detract from naturalness and the solitude feelings otherwise possible creating a negative impact.

Additional signing may also tend to attract more visitation than would otherwise occur.

Management Units

(Refer also to Part III, Management Strategy.)

Proposed Action Alternative

The division of the wilderness areas into five management units is proposed to recognize the opportunity to tailor management a little differently from one part of the WA to another in response to natural environmental features and potentials.

The effect of this proposal would be to bring to the managers' and publics' attention that certain parts of the WA have different environments and hence potentials for wilderness management emphasis as described in the management plan. For example: Unit 1, West Virgin is better suited for improving the supplemental wilderness values of bighorn sheep and desert tortoise habitat; Unit 2, Virgin Gorge is best suited for scenic values protection; or Unit 5, the Coves is suited for more general wilderness management with no specific element being emphasized.

The most obvious impact of this division would be to predetermine to some degree if and where new improvements might be considered.

It also gives present and future managers and the public a clearer view of intended management directions and avoids potentials for loss of management consistency.

No significant impacts to environmental components are expected.

Wilderness Quality Emphasis Alternative

Same as the Proposed Action Alternative.

Wilderness Quality Maintenance Alternative

This alternative does not propose a management unit concept. Management would have the same direction throughout both WAs foregoing the benefits of more detailed management direction.

No significant impacts to environmental components are expected.

Aircraft Use (Nonemergency)

Proposed Action Alternative

The AGFD uses aircraft in managing bighorn sheep and mule deer herds to determine population, location and other data as well as to track or retrieve radio collars from bighorn sheep. Helicopters could also be useful to release additional sheep into the Virgin Mountains to supplement the existing herd.

BLM may have occasional need for administrative aircraft use including infrequent landings at Black Rock helispot for such things as ferrying maintenance materials or removal of abandoned improvement material. Another potential use may be eventual removal of the bighorn sheep enclosure.

Other individuals or agencies could have legitimate low level or landing uses not yet identified.

The AGFD needs that involve low level flights but not landings would be identified in advance and receive minimum tool criteria review and minimized where practicable. AGFD proposed landings, all BLM uses and other presently unidentified uses would be analyzed in a case-by-case EA that includes minimum tool review.

Low level aircraft flights for wildlife monitoring have both beneficial and detrimental impacts. Healthy wildlife populations add wilderness ecosystem diversity, sightseeing and hunting opportunities. Aircraft can frighten and disrupt normal behavior for both livestock and wildlife.

Solitude and naturalness are compromised for wilderness visitors by the noise and sight of aircraft.

The levels of use and impacts would be less than the prewilderness situation.

Emergency aircraft uses for human safety, and fire control to protect wilderness and adjacent nonwilderness lands are approved or disapproved on a case-by-case basis by the authorized officer. This could include using Black Rock helispot to preposition fire personnel during high danger periods which affects humans and animals with unnatural sight and sounds.

Wilderness Quality Emphasis Alternative

Under this alternative impacts from landings would be eliminated. Low level aircraft use would be infrequent and if it occurs, could be timed to least interfere with visitor uses. The potential for some impacts to solitude, naturalness and visitor experience remain but at a much lower level than prior to wilderness designation.

If low level flights are discouraged and landings prohibited, Game and Fish agencies (whose use potential is the greatest) would not be able to land to determine mortality causes or fly low to locate collared sheep creating a negative impact on bighorn sheep management.

Wilderness Quality Maintenance Alternative

Under this alternative, flights and landings would be less than the prewilderness condition. This level of flights and landings would have moderate impacts to wilderness visitors including losses of solitude, naturalness and possibly annoyance. These impacts would be slightly less than the prewilderness condition.

It would contribute only slightly to overall efficiency in management compared to the Proposed Action Alternative.

Abandoned Improvements and Disturbed Sites

Proposed Action Alternative

Selected abandoned improvements would be removed based on accessibility and degree of unnaturalness. Any resulting disturbance would be rehabilitated. Implementation of this alternative would provide short term trade-offs for long term wilderness benefits. In the short term, use of motorized vehicles or in extreme cases infrequent helicopter landings or heavy equipment to remove unnatural structures or rehabilitate damaged sites may be traded for the long term benefits of naturalness, and lack of man-made features. Use of the minimum tool and removing only selected features based on accessibility and degree of unnaturalness should minimize equipment use while still providing some wilderness enhancement.

Examples of possible abandonments could include fences, stock reservoirs or in the future, the bighorn sheep enclosure.

All proposed abandonments would be analyzed by an EA (see Appendix B) to identify site specific impacts.

Wilderness Quality Emphasis Alternative

This alternative contemplates an accelerated removal of abandoned man-made features (not accelerated abandonment) with a higher level of potential motorized equipment use balanced with more long term naturalness.

All proposed abandonments would be analyzed by an EA (see Appendix B) to identify site specific impacts.

Wilderness Quality Maintenance Alternative

Implementing this alternative would allow natural improvement deterioration. It would not require any use of motorized equipment, and thus provide maximum solitude. The trade-off would be offset by longer term existence of man-made features.

Recreation

Trail Management

Proposed Action Alternative

Under this alternative existing trails would not be maintained for recreation purposes and new trails would not be constructed. This approach would minimize impacts caused by human activity in developing new trail systems and maintaining existing trails. Difficulties could arise in the future by visitors attempting to utilize these existing trails if they have deteriorated from lack of maintenance by flooding or regrowth of vegetation.

Wilderness Quality Emphasis Alternative

Under this alternative the existing trail system would be abandoned with portions of the abandoned trails recontoured and vegetated if necessary to improve the quality of the wilderness. This alternative would help preserve the area's natural condition although the visitors may have difficulty finding their way over some of the rougher parts of the wilderness. In some cases livestock utilize these trails to move around within their allotments. If portions of the trail system were rehabilitated and made unusable, an adverse impact to livestock grazing could result.

Wilderness Quality Maintenance Alternative

This alternative would continue with the past trail system. Maintenance would be provided as necessary and improvement of certain trails for safety purposes would be allowed if warranted. Naturalness could be adversely impacted on certain upgraded trails, especially if materials used were not natural to the area such as steel posts and wire. Solitude would be disrupted by the presence of crews working within the wilderness especially if motorized equipment such as chainsaws or drills were used.

Trailheads/Parking

Proposed Action Alternative

Minimum parking would be provided outside wilderness areas near traditional trailheads and inside wilderness if necessary to protect wilderness values. Minimum parking would consist merely of clearing enough rocks and vegetation from small areas, either by hand or by mechanical means, to prevent damage to vehicles either entering or leaving the parking area. Parking areas inside wilderness would result in slightly negative impacts to naturalness and slightly positive social impacts on visitors by providing easier access.

Wilderness Quality Emphasis Alternative

Under this alternative, designated trailheads or improved parking on or adjacent to wilderness would not be provided. For those individuals seeking a wilderness experience totally free from human influences, the alternative would be beneficial. For visitors who would need or appreciate a place to park and explore the wilderness using designated trails and information available at trailheads, the lack of such facilities and services would be a negative impact. These impacts are not significant and are no change from the prewilderness condition.

Wilderness Quality Maintenance Alternative

Under this alternative improved parking outside the wilderness area or adjacent to open roads within the wilderness areas would be provided with continued formal trailhead designations. Improved parking would consist of clearing areas

of rocks and vegetation, leveling, and if necessary, graveling. By providing parking areas at designated trailheads outside the wilderness impacts would be negligible. This alternative is not justified by current levels of trailhead or parking use.

Grazing Management

Management Planning

Proposed Action Alternative

Incorporating wilderness constraints into AMPs (existing or new) and licenses would effectively manage grazing and notify users of what may and may not be allowed in wilderness areas in connection with their grazing operation. This would result in beneficial impacts to wilderness character over prewilderness conditions by avoiding improper grazing or vehicle use activities.

Continuing to upgrade grazing management intensities would slowly improve naturalness with trends toward more natural ecosystems with a minimum of impacts caused by new improvements. Any new improvements, although minimal, would intrude on naturalness, solitude and pristine conditions.

Wilderness Quality Emphasis Alternative

Impacts would be the same as the Proposed Action Alternative except that this scenario relies on less intensive management techniques than normally expected in an AMP. New improvements would not be constructed to implement more intense grazing systems. Techniques would require greater livestock control with existing improvements, adjusting seasons of use or numbers of livestock to effect improvements in ecological conditions.

This alternative would require significantly greater management effort from livestock users and require a longer term than the proposed action to show significant environmental changes.

There would be less intrusion on wilderness values from construction and existence of improvements creating a beneficial impact.

Wilderness Quality Maintenance Alternative

Incorporating wilderness management constraints into existing or new AMPs (and licenses pending new AMPs) would prevent inadvertent misuse of wilderness by grazing operators.

New AMPs envisioned under this alternative would require expenditures and management effort of permittees and require additional range improvements to implement. These range improvements would create negative impacts on wilderness values and detract from naturalness and pristine conditions.

The ecosystems in these WAs are largely shrub, brush and pinyon-juniper dominated. More intense grazing management would provide positive impacts by slightly improving diversity in species and overall vegetation abundance. These changes would be slow and would not be significant in the short term.

New Range Improvements

Proposed Action Alternative

This alternative would allow a few new improvements to enhance resource protection and also wilderness quality values. An example would be fencing off riparian areas or other grazing concentrations to enhance wildlife or visitor uses.

Each proposal would be evaluated in a site-specific EA and minimum tool review on a case-by-case basis.

Wilderness Quality Emphasis Alternative

By not allowing new improvements there would not be any additional man-made intrusions on naturalness or solitude. Some opportunities for positive impacts to ecological conditions, water and wildlife would be foregone if no improvements were implemented.

Wilderness Quality Maintenance Alternative

This alternative would provide opportunities to consider more new improvements than the Proposed Action Alternative. Each proposal would be reviewed by a site-specific EA and minimum tool review.

Range Improvement Inspection and Maintenance

The management plan establishes a procedure for handling maintenance and inspection of range improvements following congressional guidelines (Appendix B). There are no alternatives to following these guidelines.

Entries of either motor vehicles or earthmoving equipment into wilderness areas would be analyzed in site-specific EAs as outlined in the procedures.

Wildlife Habitat

Riparian Habitat Monitoring

Proposed Action Alternative

Monitoring data on selected riparian areas would provide significant data for use in the LAC integrated network for use in directing management actions.

As a result of the monitoring program, there may be restrictions on livestock on riparian areas. This would be a beneficial impact to the riparian ecosystem, and may be a detrimental impact to livestock operations.

Wilderness Quality Emphasis Alternative

Same as described for the Proposed Action Alternative.

Wilderness Quality Maintenance Alternative

Foregoing riparian area data could result in forfeiture of management decision data and in some cases a negative impact of less than desirable management of riparian ecosystems.

Motorized Improvement Maintenance

The same alternatives, analysis and potential impacts as outlined in this Appendix, Administration section, Motorized Vehicles apply to the use of vehicles or mechanized equipment in inspection and maintenance of wildlife improvements.

New Improvements

Proposed Action Alternative

This alternative considers the possibility of a small number of wildlife improvements in addition to those that presently exist to enhance wilderness values through wildlife abundance or diversity. An example would be additional water catchments to expand deer or bighorn sheep habitat. Each proposal would be reviewed in a separate sitespecific EA including minimum tool considerations.

Wilderness Quality Emphasis Alternative

No new improvements would avoid any further negative impact of intrusion on naturalness, scenic views or solitude and be a positive impact to wilderness users.

The potential improvements to wildlife abundance and diversity would be foregone which would negatively impact persons engaged in viewing or hunting.

Wilderness Quality Maintenance Alternative

This alternative would allow more opportunities for wildlife improvements.

Each project proposal would be considered in a separate EA, minimum tool determination and decision record.

Minerals

Bonding

Proposed Action Alternative

Under this alternative sufficient bonding would be required to cover expected reclamation efforts prior to the commencement of operations. This would be a beneficial impact by insuring the protection of wilderness values. The cost of purchasing and maintaining such a bond during the life of a mining operation would create a negative economic impact to the mining operator.

Wilderness Quality Emphasis Alternative

Same as the Proposed Action Alternative.

Wilderness Quality Maintenance Alternative

This alternative would require bonding only after prior notice of noncompliance has been shown for a mining operation. This could create a serious negative impact to wilderness values by allowing surface damage to occur without a bond to cover reclamation expenses.

Monitoring

Proposed Action Alternative

Under this alternative periodic contact with claimants would be maintained. Inactive claims would be visited quarterly with operating claims visited biweekly. This would help prevent the possible negative impact of unnecessary degradation of the wilderness character by maintaining close communication and coordination with the claimant and in detecting unauthorized actions early.

Wilderness Quality Emphasis Alternative

This alternative would maintain contact with claimants even more frequently than the Proposed Action Alternative. Dormant claims would be visited monthly and operating claims would be visited weekly to prevent or detect unauthorized actions. Potential beneficial impacts of this alternative would be the same in nature as the Proposed Action Alternative, but even greater with the higher numbers of visits to each claim.

Wilderness Quality Maintenance Alternative

Under this alternative dormant claims would be visited annually and operational claims visited quarterly to help prevent or detect unauthorized actions. The potential beneficial impacts of this alternative would be similar to the Proposed Action Alternative, but to a far lesser degree because of the lower number of visits to each claim. The potential for unauthorized actions and negative impacts would be higher than for the other alternatives.

Lands/Realty

Motorized Right-of-Way Inspection and Maintenance

Under all alternatives, nonemergency use of motorized vehicles or mechanized equipment to enter wilderness lands for routine maintenance would require a 60-day notice to BLM and EA with minimum tool review. For emergency needs where a 60-day notice would not be possible, permission to maintain (under certain conditions including minimum tool determination) could be granted by the authorized officer.

Monitoring

Under all alternatives, actions and impacts would be the same as those described under this Appendix, Minerals section, Monitoring. Magnitudes of certain impacts could vary depending on variations in frequency of contacts with right-of-way holders or the lessee. No contact increases risks for unilateral actions on the part of the holder that could affect wilderness values.

Nonfederal Inholdings

Under this alternative, acquisition of private and Utah State inholdings would eliminate potential negative impacts to the wilderness due to development and/or commercial use. There would be a positive or neutral economic impact to the owners since they would receive fair market value or other land equal in value.

Water/Water Quality

Water Rights

Proposed Action Alternative

Under this alternative, BLM would file for water sources important to maintaining wilderness character as well as opposing private control requests. This alternative would have the positive impact of protecting waters that are important to maintaining wilderness character. It may be detrimental to potential users of unappropriated waters. Under wilderness designation the only parties that could make beneficial use of most springs would be livestock permittees who could continue to share in the waters' use under a BLM filing, thus making the potential impact insignificant. Protecting springs feeding the Virgin River would also avoid potential impacts to the Virgin River scenery and ecosystem.

Wilderness Quality Emphasis Alternative

This alternative is the same as the proposed action above, except the BLM would file for rights on all unappropriated waters in the wilderness

areas. This alternative has the potential for negative social impact to persons who may perceive this scenario as too much federal control. Conservation or recreation interests may feel more secure knowing that all water sources would be protected under a specific reservation.

Wilderness Quality Maintenance Alternative

This alternative proposes BLM filing on selected water sources, but not opposing private filing on noncritical waters. Impacts for this alternative would be very similar to those of the Proposed Action Alternative. Water sources would be more available for private appropriation (which would be most likely on site livestock/ wildlife uses) with reduced potential for social concerns related to too much federal control. Wilderness area protections would preclude any private developments for offsite uses, thus private appropriations would have little practical effect on wilderness values.

Some management options could be lost by private control of waters.

Water Quality

Proposed Action Alternative

With little exception, surface water (stockponds, streams, water troughs or water holes) are not acceptable for human consumption. The only suitable sources for human consumption are from springs near their source. Monitoring some of these important sources could provide baseline quality data for management purposes in the LAC program as well as information on suitable or unsuitable water sources for wilderness users, thus providing positive benefits. There could be negative impacts to users' solitude if they encounter BLM personnel collecting samples.

Wilderness Quality Emphasis Alternative

More intensive monitoring would provide greater quantities of data which would magnify the potential beneficial and negative impacts described under the Proposed Action Alternative. Especially important under this alternative would be the value of added information for management of water related ecosystems under the overall LAC monitoring system. Greater losses of solitude from collection activities would occur.

Wilderness Quality Maintenance Alternative

Lack of any water quality data would subject recreational users to some risks in consuming natural waters. There would be a lack of information to consider in making overall management decision including foregoing use of the LAC system.

There would be no loss of solitude resulting from water sampling from the prewilderness situation.

Wildfire

Management

BLM policy states that fires ocurring on public lands are either wildfires or prescribed fires. The BLM is responsible to suppress all wildfires on public land. In order to allow naturally ignited fires to burn on public lands, they must be designated as prescribed natural fires and a prescription must be prepared before the fire starts (see Appendix C). Suppression techniques would be with minimum tool. This alternative would benefit the wilderness resource by allowing natural processes to continue unaltered unless critical wilderness values would be lost. The livestock operator could be negatively impacted if critical forage species were lost or weakened allowing invasion of undesirable species.

Information/Education

Proposed Action Alternative

This level of information is anticipated to meet the needs of a slowly increasing number of visitors. It would have insignificant impacts on users or the wilderness lands, but tend to protect the wilderness areas from human visitor traces. It would provide some visitor safety elements, but allow a reasonable degree of visitor risk.

Wilderness Quality Emphasis Alternative

This alternative may increase visitor risks due to lack of safety information. This can add to or detract from a wilderness experience depending on view point. It would tend to limit visits through lack of information or opportunities and thus protect the wilderness areas from human impacts.

Wilderness Quality Maintenance Alternative

Additional and more widely available visitor information would attract more visitors and addi-

tional human user impacts. Greater emphasis on user hazards would decrease risk and prevent accidents or tenuous survival situations.

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the EA, I have determined that impacts are not expected to be significant and an environmental impact statement is not required.

George W. Cropper, Area Manager
Shivwits Resource Area

August 9, 1990
Date

DECISION AND RATIONALE

The selected alternative for this plan is the Proposed Action. This alternative was selected because it is consistent with the public comments received on the Draft Plan, legislative mandates, and Bureau policy.

APPENDIX B

PROCESS FOR ADMINISTERING MOTORIZED VEHICLE/MECHANIZED EQUIPMENT USES IN LIVESTOCK GRAZING OPERATIONS AND MAINTENANCE OF RANGE IMPROVEMENTS

Congressional guidance in House Report 96-1126 provides overall direction for management of grazing including criteria for the possible use of motorized vehicles in livestock management or maintenance of range improvements.

The language of the house report is very clear in its intent that livestock grazing and necessary facilities to support a livestock grazing program will be permitted to continue when established prior to wilderness designation. The house report further states that wilderness designation should not prevent the maintenance of existing fences or other livestock management improvements, nor the construction and maintenance of new fences or improvements which are consistent with allotment management plans and/or which are necessary for the protection of the range.

The house concluded that the general rule of thumb on grazing management in wilderness should be that activities or facilities established prior to the date of an area's designation as wilderness should be allowed to remain in place and may be replaced when necessary for the proper administration of the grazing program.

As directed by Congressional intent and BLM's Wilderness Management Policy, the following process will be used in administering these nonconforming but accepted uses.

This process is depicted on the flow chart on page 49.

A list of all of the range improvements known to be located in the Paiute and Beaver Dam Mountains Wilderness Areas has been compiled and is summarized at the conclusion of this appendix.

Available data from such sources as project files, maintenance inspections, aerial photographs, employee and permittee knowledge, water inventories and field inventories when necessary will be compiled for each project. This data will provide answers to these questions.

1. What is present use of the project and is it needed with respect to the future AMP or grazing programs?
2. Is the project accessible by motorized vehicle?
3. Was motorized access used in its maintenance prior to wilderness designation?
4. Is motorized access necessary for present and future maintenance?
5. Can part or all of the maintenance be done by nonmotorized means?
6. Age of the project?
7. Condition of the project?
8. Frequency and duration of possible motorized needs?
9. Type of motorized equipment (if any) that may be appropriate or available?

Using this information and following the BLM Wilderness Management Policy criteria (Chapter III.H.1.d and e) the authorized officer will, after consultation with the affected permittee, determine and document by individual project which are needed to continue the allotments' grazing management programs and which are not needed.

Those not needed will no longer be maintained and the party responsible for maintenance notified to discontinue maintenance. An Environmental Analysis (EA)/ Decision Record (DR) will be prepared to analyze impacts of removing the abandoned projects considering possible cultural values, practicality, feasibility and use of motorized vehicles in removal. A Decision Record will then document by name those projects where removal will be considered and those to be allowed to naturally disintegrate.

Those developments which appear at this point to be needed will be further analyzed relative to the need for and type of motorized equipment that

may be necessary for their maintenance based again on the information described by the above list. They will be grouped into three categories for analysis purposes based on need for or type of possible motorized vehicle and/or equipment use.

Any project may be independently evaluated through the remainder of the process at separate times for either maintenance of a routine nature or reconstruction where more equipment may be necessary.

For those projects where it is conclusively determined that neither motorized vehicles nor mechanized equipment will be required in maintenance, no further analysis will be made. A list of these projects will be prepared, the grazing permittee notified and the list and maintenance decision made a condition of the AMP and/or grazing permits by reference. On this basis, the permittees will be authorized to proceed with nonmotorized maintenance.

Compliance with these nonmotorized requirements will be a component of BLM's wilderness monitoring program.

A second proposed list by priority of need will be prepared for those projects where occasional motorized vehicle use is deemed necessary to inspect or maintain the improvements. Normal vehicle use expected would be ATVs or trucks up to 2½ ton to haul materials or livestock.

A site-specific EA will be prepared to analyze environmental impacts of alternatives with respect to type, frequency of or access routes for motorized vehicles on each individual project or group of projects where the proposed vehicle uses and potential environmental impacts are the same. It will also consider factors such as minimum tools or possible project relocation outside of the wilderness area.

These EAs will be prepared in priority order as rapidly as possible following issuance of the final Wilderness Management Plan and will be available for public review upon request.

A DR will be prepared to document the alternative selected and mitigating measures for each project.

Upon completion of these EAs and DRs, a written maintenance plan will be prepared in consultation with the permittee and based on mitigating measures developed in the EA and in conformance with the Decision Record. It will detail timing, vehicle type, number of trip(s), authorized person(s) and record keeping requirements.

This plan will be incorporated into the AMP and grazing permit by reference and will, upon approval, authorize the permittee to make motorized uses as specified during the normal grazing period for the allotment.

In making uses authorized in the maintenance plan, each permittee will be required to keep accurate records of date, time, type vehicle, trail used, purpose and duration of any motorized entry. This log will be submitted to the BLM at the end of the grazing period.

Field compliance on these motorized vehicle entries will be made and documented. Findings can then be compared to the records submitted by the permittee to detect and correct discrepancies or violations.

Vehicle entry deemed necessary specifically for livestock management purposes will be processed in the manner described above with the same constraints, reporting requirements and monitoring procedures.

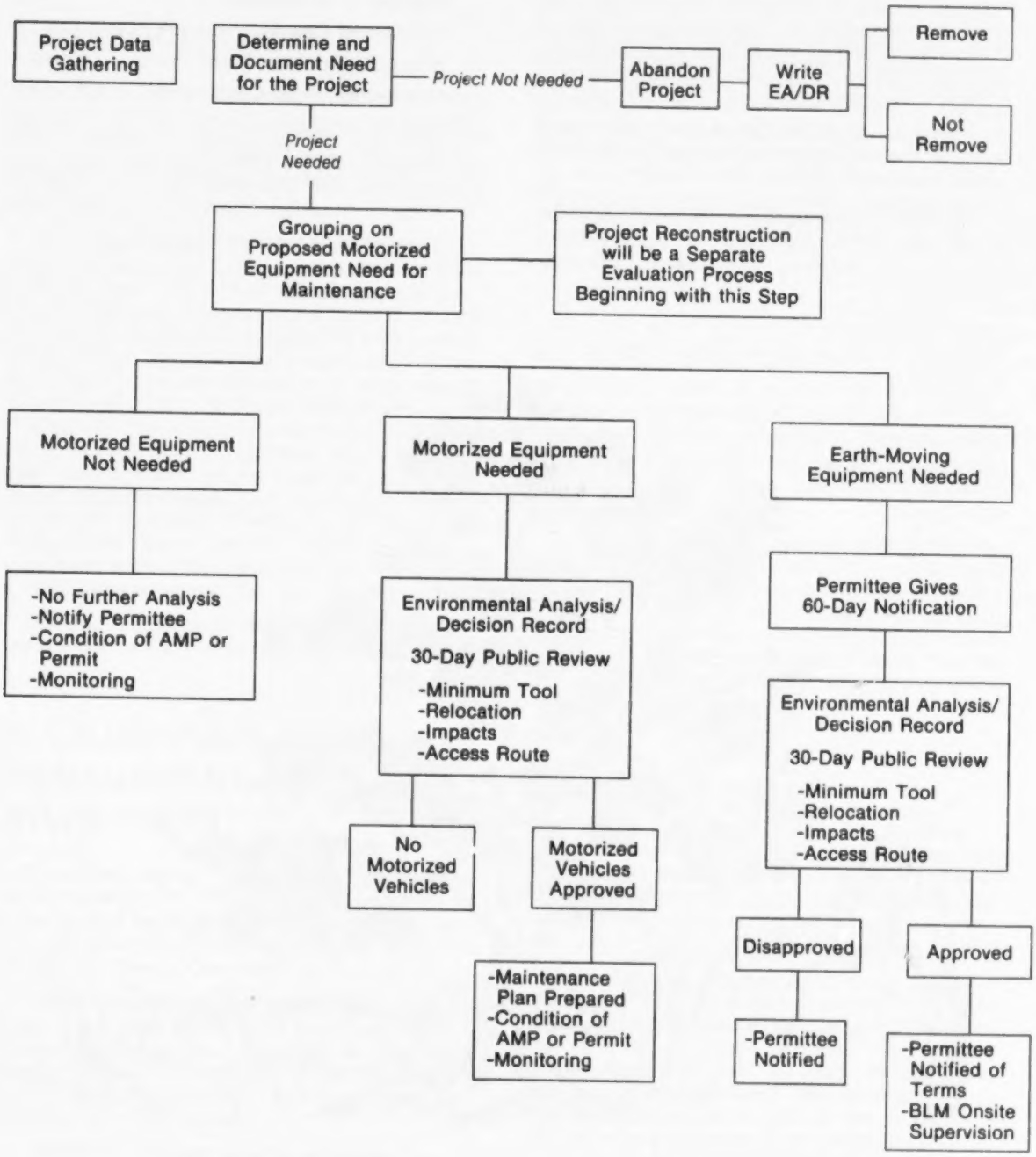
The third project grouping includes those developments where heavy earth-moving equipment is deemed necessary. These proposals will require a minimum 60-day notice from a permittee of the possible need for project maintenance. The project is examined in the field and a sitespecific EA is prepared that examines the need for maintenance and alternatives of access, equipment, tool(s), timing, possible relocation as well as recommending mitigating measures and reclamation requirements.

A DR is prepared that selects an alternative with mitigating measures or a no action alternative. If the decision permits the action to proceed, the permittee is notified of the terms and timing approved. It is standard procedure to have a BLM wilderness or surface protection specialist on site during any earth-moving operations to assure compliance with terms and supervise reclamation.

Throughout this process, it may be found that individual projects have been improperly classified relative to its continuation or need for equipment. For example a project expected to require motor vehicle access may be found by the EA analysis to not need vehicles, a heavy equipment proposal may be found to be accomplishable with motorized vehicles or vice versa. Also a project preliminarily determined to be not needed, may be upon further analysis found to be needed. In these cases, the project's processing will be transferred to the more appropriate procedures that cover the newly determined situation.

APPENDIX B

MAJOR STEPS OF MOTORIZED VEHICLE/MECHANIZED EQUIPMENT ANALYSIS AND MANAGEMENT PROCESS



APPENDIX B

At any point in this process, the authorized officer will consider all information available at that point to approve or deny proposals for emergency motorized use to protect life or property. Considerations will include validity of the emergency and potential impacts to wilderness values.

Proposed use of vehicles for all purposes (livestock management, improvement inspection or maintenance) will be considered in total prior to approval and trips combined where practicable to minimize the overall amount of vehicle use.

All inventories, lists analysis, EAs, DRs, monitoring and compliance files will be available for public review on request.

The range improvements known to exist in the Paiute and Beaver Dam Mountains Wilderness Areas and to be analyzed under these procedures include:

Number of Spring Developments	31.0
Miles of Pipeline	7.0
Mile of Livestock Fence	59.3
Number of Reservoirs	12.0
Number of Corrals	11.0
Miles Livestock or Truck Trails	26.5
Number of Water Catchments	4.0
Number of Cabins	3.0
Acres of Land Treatment (burning, chaining, seeding)	3,275.0
Miles of Diversion Ditch	1.0
Number of Water Haul Tank Sites	4.0

APPENDIX C

FIRE MANAGEMENT PLAN

I. INTRODUCTION

The Paiute Wilderness Area lies about 18 miles southwest of St. George Utah on the Arizona Strip. The adjacent Beaver Dam Mountains Wilderness Area lies about 10 miles southwest of St. George, Utah and straddles the Utah/Arizona state line.

The Paiute Wilderness Area is 84,700 acres in size and the Beaver Dam Mountains Wilderness is 19,600 acres in size. The Paiute and Beaver Dam Wilderness Areas together cover 104,300 acres of public land and dominate the northwest portion of the Arizona Strip and southwest Utah. The two Wilderness areas are separated by Interstate 15 which winds it's way down the Virgin River Gorge. The substantial elevation changes in the Paiute has created a land of contrasts which includes plant communities ranging from the hot Mohave Desert through stands of pinyon-juniper on up to ponderosa pine and Douglas fir on the cooler north-facing slopes. See the Paiute and Beaver Dam Mountains Wilderness Management Plan for a more complete description of vegetation.

This plan will guide fire management in the Paiute and Beaver Dam Mountains Wilderness Areas.

II. OBJECTIVES FOR FIRE MANAGEMENT IN WILDERNESS

Objectives relating fire management to other resource programs, public safety, protection of property and legislative and administrative policies will guide the fire management program in the Paiute/ Beaver Dam Wilderness Areas.

The Wilderness Management Plan has divided these wilderness areas into five Management Units. The Management Objective for Fire Management in these Wilderness Areas is the same for all five Management Units. The Management Objective in the Plan states:

> Generally, fire will be allowed to play it's natural role in the wilderness ecosystem subject to requirements for public safety and protection of private property.

Management policies in the management plan state that wildfire will be allowed to run it's course unless human life, private property or critical wilderness values are at risk. The decision to supress human caused fires will be made on a case by case basis by the authorized officer. A wilderness resource advisor will be assigned to all fires within the wilderness areas. Suppression techniques will be those that result in the least impact to the wilderness resource. Hand tools will be used as the minimum tool whenever possible.

III. FIRE HISTORY

Historically, the majority (over 90%) of fires occurring in the Paiute and Beaver Dam Mountain Wilderness areas have been caused by lightning. Aggressive initial attack has kept fires from becoming very large.

Since 1975 there have been 93 fires in the wilderness areas for a total of 2,530.76 acres burned. Most of these fires have been less than .25 acres in size but one fire in 1975 reached 700 acres in size. Quite a few fires occur along the Interstate going through the gorge. Most of these fires are man caused but do not reach the wilderness areas due to natural barriers.

IV. FIRE REGIME

A natural fire regime is the total pattern of fires in vegetation, over time, characteristic of a natural region or ecosystem, variations in ignition, fire intensity and behavior, fire size, recurrence intervals and ecological effects.

The ponderosa pine type in a natural condition is classified as a (2) on the Heinselman Continental Fire Regime Scale—"Frequent light surface fires (1 to 25 year return intervals)." The pinyon-juniper woodlands really do not fit the scale due to a lack of ground fuels. The Mountain Shrub type is classified as a (3) on the scale—"Infrequent severe surface fires (more than 25 yr. return intervals)." The Mohave Desert type is a (0) on the scale—"No natural fire."

V. NATURAL ROLE OF FIRE

Fire has long been an important component of the ponderosa pine ecosystem. The ponderosa pine is a very fire tolerant species. Before man started suppressing fires in the pine type, light surface fires would periodically burn through the understory. This reduced the buildup of ground fuels, created natural fire breaks, created and improved wildlife habitat and recycled important nutrients back into the soil. The return interval of these light surface fires is from 3 to 7 years. Years of fire suppression has changed this situation. Continued suppression of all starts could produce unnatural fuel buildups increasing the likelihood of a catastrophic wildfire.

The pinyon-juniper vegetation type is not greatly affected by fire. Much of the area in this type does not contain enough surface fuel to carry a fire and the trees are spaced far enough apart so that fires cannot jump from tree to tree except in the most extreme burning conditions. Typically, fires in this type are isolated to one tree or a small group of trees. There are areas (mainly high elevation, easterly facing slopes) where enough fuel is present to carry fires in this type. The fire seral community that comes in is Mountain Shrub.

The Mountain Shrub community is prone to fires on a recurring basis. Many of the plant species in this type are prolific sprouters and recover well from fire. In fact, keeping fires out of this type causes it to become so dense that animal movement through it is restricted. Periodic fires in this type keep it open enough for wildlife to range through it and enhances forage value of the plants by keeping them young and succulent.

The Mohave Desert type does not have a fire history because of the lack of ground fuels in this type and the wide spacing of plants. There is only potential for fires spreading if there is an understory of annual grasses. Fortunately this does not occur in much if any of the wilderness areas at the present time.

VI. PROPOSED DEGREE OF SUPPRESSION

BLM policy states that fires occurring on public lands are either wildfires or prescribed fires. The BLM is responsible to suppress all wildfires on public land. In order to allow naturally ignited fires to burn on public lands, they must be designated as prescribed natural fires and a prescription must be prepared before the fire starts. The following action plan will outline fuel models and associated prescriptions for each fuel type in each wilderness, steps that will be taken upon the report of an ignition, management constraints and a section on how fires will be monitored.

A. Fuel Models and Prescriptions

There are two classified fuel types and two unclassified fuel type in the two wilderness areas.

1. NFDRS Fuel Model C

Open ponderosa pine stands typify Model C fuels. Perennial grasses and forbs are the primary ground fuels but there is enough needle litter and branchwood present to contribute significantly to the fuel loading. Some brush and shrubs may be present but they are of little consequence. Situations covered by Fuel Model C are open, longleaf, slash, ponderosa, Jeffrey and Sugar Pine stands. Some pinyon-juniper stands may qualify.

a. Prescription

The following prescription criteria will be used for fuel model C.

Temperature	< 75
Minimum Relative Humidity	> 20%
10 Hr. Fuel Moisture	> 15%
1,000 Hr. Fuel Moisture	> 20%
20 Ft. Windspeed	< 10 mph
Live Fuel Moisture	> 130%

Five of the six criteria outlined above must be met before the fire is considered to be in prescription. The weather information will be obtained from the Tweedy Points Remote Automated Weather Station (RAWS) and corrected for elevation until personnel are on the fire.

2. NFDRS Fuel Model F

Fuel Model F represents mature closed chamise stands and oakbrush fields of Arizona, Utah, and Colorado. It also applies to young, closed stands and mature, open stands of California mixed chaparral. Open stands of pinyon-juniper are represented; however, fire activity will be overrated at low windspeeds and where there is sparse ground fuels.

a. Prescription

The following prescription criteria will be used for fuel Model F.

Temperature	< 85
Minimum Relative Humidity	> 10%
10 Hr. Fuel Moisture	> 5%
20 Ft. Windspeed	< 15 mph

Three of the four criteria must be met before the fire is considered to be in prescription. This information will be gathered from the Tweedy RAWS station and corrected for elevation. If ground monitors are dispatched to a fire in this fuel type, weather observations will be made on site.

3. Unclassified Pinyon-Juniper

This includes those areas of Pinyon-Juniper where there is not enough of an understory to carry surface fires. The prescription for these areas is the same as for fuel model F.

4. Unclassified Mohave Desert Type

This includes the Mohave Desert Shrub type. There are not enough fine fuels present to carry a fire. This type will have to be watched closely over time to determine if annual grasses are invading the area. These grasses can produce in enough abundance to provide a fuel source for fires. If this happens, it will be necessary to reevaluate the suppression strategy for this type. The suppression strategy for fires in this vegetation type will be observation.

B. Action Following the Report of an Ignition

Immediately following the report of a lightning fire within either of the wilderness areas the Area Manager or his designated Wilderness Resource Advisor along with the District Fire Management Officer or Fire Control Officer will fly aerial reconnaisance over the fire and make a recommendation as to the type of action to be taken. The District Logistics Coordinator will advise the reconnaisance personnel of the current weather conditions and will assign a fire number to be used until a decision is made on the type of action to be taken. The District Manager, or his designated representative, will make the decision as to what action will be followed. If a fire appears that it will be of significance a Wilderness Resource Advisor will be immediately dispatched to the fire to provide guideance to the Incident Commander on Wilderness considerations in the supression effort. A decision matrix (attached) will be used to help make this decision. The decision matrix will be reviewed daily to ensure that all items are considered on a daily basis. The Decision Matrix is set up so that the first decision that must be made is the fuel type that is burning and which matrix to follow. This decision will be made as follows:

—Fuel Model C— This is the model used for the Ponderosa Pine stands on top of Black Rock Mountain. The principal fuel carrying a fire in this type is grass and needle cast. Under the prescription outlined above, the fire will not involve the trees for the most part. If a fire is determined to be located in this fuel type page 57 of the decision matrix will be used as a guide as to whether to call the fire a prescribed natural fire or to supress the fire.

—Fuel Model F— Fuel model F applies to the stands of oakbrush and other chapparal vegetation as well as the more dense stands of Pinon-Juniper. If a fire is determined to be located in this type page 58 of the decision matrix will be used as a guide as to whether to call the fire a prescribed natural fire or supress it.

—Unclassified Pinon-Juniper and Mohave Desert Types— There are not enough ground fuels in these types to carry fire. If a fire is determined to be located in these fuel types it will be observed until it goes out on it's own. For the most part fires in these types will be limited to individual trees or shrubs with no potential for spread.

1. Suppress the Fire

Should the fire appear to need suppression action the Logistics Coordinator will dispatch the

appropriate initial attack forces and suppression costs will be charged to Fire Suppression Funds (4620).

The Minimum Tool Concept will be used in the suppression of fires in the Wilderness Areas. Priority will be given to methods that least disturb natural features. These include handcrews and engines operating from wilderness boundary roads. If these resources can not handle the fire the next resource consideration will be the use of aircraft including both retardent planes and helicopters using water bucket drops. The use of motorized vehicles and aircraft in the wilderness areas requires approval by the District Manager (except under urgent situations; in which the Incident Commander will make the decision). Power saws may be used in the wilderness areas as deemed necessary. Any suppression action involving motorized equipment occuring in the wilderness areas will be documented and made part of the Wilderness Management File.

2. Declare the Fire a Prescribed Natural Fire

If the decision is made to declare the fire a prescribed natural fire the following actions will be taken:

a. The District Manager will assign a Prescribed Fire Manager for fires that are approaching five acres in size. During the months from May 1 to August 31 the initial job of the prescribed fire manager will be to establish a perimeter of approximately 50 acres utilizing existing barriers wherever possible. Any remaining perimeter will be constructed using handtools. He/she will then be responsible to monitor the fire as outlined in the Monitoring and Documentation section that follows. During the months from Sept. 1 to April 30 no perimeter construction will be required but may be used as conditions dictate.

b. Fires smaller than five acres in size can be monitored periodically from the air. Observations made from the air will be recorded each time a fly-over is made of the fire. In the case of multiple fires, observations will be documented for each specific fire.

c. The Logistics Coordinator will notify the Arizona BLM State Office that we have a prescribed natural fire in progress. Daily updates of the fire will be submitted on the daily fire situation report.

d. The Logistics Coordinator will notify the Arizona State Land Department of the fire and will implement the smoke management portion of this plan.

e. Surrounding agencies will be notified of the prescribed natural fire in progress. These agencies include:

Kaibab National Forest
Grand Canyon National Park
Lake Mead National Recreation Area
Dixie National Forest
Cedar City District BLM
Truxton Canyon Agency BIA
Las Vegas District BLM
Washington County Sheriff
Mohave County Sheriff
St. George Police Dept.
Port of Entry
Mesquite Police Dept.

f. The District Public Affairs Officer will prepare a news release on the prescribed natural fire in progress and release it to normal news media channels.

g. The maximum number of prescribed natural fires that will be allowed on the district at any one time is limited to 5 fires larger than 10 acres in size. Totally, these prescribed natural fires will not exceed 500 acres at any one time. The maximum fire size that will be allowed in the Paiute or Beaver Dam Wilderness areas will be 50 acres. No fire will be allowed to burn for more than 10 days. Regardless of size, any prescribed natural fire that is burning after 10 days will be contained within a fireline and extinguished.

3. Management Constraints

a. The fire management officer will prepare a contingency plan when there is prescribed natural fire activity to assure the number or area of live fire is within the District's capacity to manage. The contingency plan will be updated as changes in fire numbers or size changes. The Arizona State Office will keep the District notified of Regional or National fire situations that could draw suppression forces from the district and impose constraints on prescribed natural fires.

b. In the event of a prescribed natural fire going out of prescription the Prescribed Fire Manager in conjunction with the District FMO and the Shivwits Area Manager will evaluate the situation and determine if the fire will be allowed to burn to the 50 acre perimeter. If the decision is made to suppress the fire inside the 50 acre perimeter suppression costs will be charged to the benefitting sub-

activity. If the fire escapes the 50 acre perimeter it will be declared a wildfire and suppression costs will be charged to 4750.

c. The District Manager has the authority to override this plan anytime the district's wildfire situation becomes so complex that adequate suppression forces are not available to safely manage a prescribed natural fire.

C. Monitoring and Documentation

Monitoring and documenting the effects prescribed natural fires have on the wilderness ecosystem will be very important in letting us know how good a job we are doing and will help us better predict what fires will do the next time they occur in the same area. Ground monitoring of prescribed natural fires should attempt to secure the following information:

- Estimate of fuel loading and fuel consumption
- Vegetation changes
- Fire intensity and fire behavior
- Fire weather
- Fire effects

This information will be analyzed and placed in a file for the fire. Photographs should also be obtained if possible and made part of the fire file.

It will not be possible to obtain the information above while monitoring fires from the air. Aerial observers should try to ascertain as much information as possible and write a narrative summary of what was occurring with the fire while they were over it. Notes on anything pertinent can be kept in the aircraft and the narrative completed as soon as the observer is back on the ground. Photographs or even video footage of the prescribed fires would be extremely beneficial.

VII. SMOKE MANAGEMENT

The predominant windflow during the time of year that any prescribed natural fires would occur is from the south. Smoke generated by any prescribed natural fire will travel to the north. Smoke accumulations will occur in drainages during the night due to downslope winds and nocturnal inversion layers. These areas should clear out very well the following day as temperatures warm up and winds pick up. There is a slight chance that smoke from any prescribed natural fires in the Paiute Wilderness Area could affect the city of St. George, Utah.

The following steps will be taken to comply with smoke mangement requirements:

A. The Logistics Coordinator will contact the BLM Arizona State Office and advise them of the prescribed natural fire in progress. The appropriate staff at the state office will notify the Arizona State Land Department and obtain the necessary clearance.

B. The District FMO will prepare a map showing smoke plume projections. Using a red marker for the daytime period, draw a line downwind of the burn for a distance representing 60 miles. Draw a 30-degree vector on each side of this centerline. For a distance reference, strike an arc at the 20, 40 and 60-mile points. Identify any major roads, communities, residences and other facilities inside this 60-mile arc.

   Using a blue marker, designate the areas where smoke would probably concentrate at night. This should reflect the shift to down-canyon winds experienced at night, and could be a 180-degree turn from the daytime smoke plume projection. Identify any major roads, communities, residences and other facilities inside this area.

C. The Logistics Coordinator will plot smoke plume projections on the District's land status map.

D. In the case that the State of Arizona wants a fire suppressed due to air stagnation conditions suppression actions will be initiated. Suppression actions within the 50 acre perimeter will be charged to the benefitting activity.

VIII. PRESCRIBED BURNING

Prescribed fires, ignited by BLM personnel, will be considered on a case by case basis only if it can be clearly shown that burning would correct an unnatural situation caused by past fire suppression activities or would serve to reduce fire danger. A site specific plan, approved by the State Director of Arizona, is required before a prescribed burn is conducted.

IX. REHABILITATION

Rehabilitation measures may be required on some fires which occur in the wilderness areas. If rehabilitation is desired on an area which was burned as a prescribed natural fire, the benefitting

activity will provide funding. Funding for rehabilitation on areas that are actively suppressed will come from 4620.

Rehabilitation measures will be considered as a part of the Escaped Fire Situation Analysis and costs will be considered as a part of that analysis.

X. FIRE BEHAVIOR

The fire behavior by NFDRS fuel model is as follows:

A. Fuel Model C (Ponderosa pine)

Spotting potential	= Moderate
Energy release	= Moderate
Rate of spread	= High
Resistance to control	= Low

C. Fuel Model F (Pinyon-juniper brush)

Spotting potential	= Low
Energy release	= Moderate to High
Rate of spread	= Moderate
Resistance to control	= Moderate

D. Unclassified (Pinyon-juniper with no ground fuel)

Spotting potential	= Low
Energy release	= Moderate
Rate of spread	= Low
Resistance to control	= Low

APPENDIX C

DECISION MATRIX (Fuel Model C)

Life or Property Threatened ——— (YES) ——— Supress
(NO)

Boundary Threatened ——— (YES) ——— Supress
(NO)

Number of Prescribed Burns < 5 ——— (NO) ——— Supress
(YES)

Smoke Management Favorable ——— (NO) ——— Supress
(YES)

Prescription Criteria Met*

Temperature	< 75
Minimum Relative Humidity	> 20%
10 Hr. Fuel Moisture	> 15%
1,000 Hr. Fuel Moisture	> 20%
20 Ft. Windspeed	< 10 mph
Live Fuel Moisture	> 130%

——— (NO) ——— Supress
(YES)

Current Weather Forecast Favorable ——— (NO) ——— Supress
(YES)

Current Fire Behavior Favorable ——— (NO) ——— Supress
(YES)

Ten Day Forecast Favorable ——— (NO) ——— Supress
(YES)

Equipment/Personnel Available ——— (NO) ——— Supress
(YES)

Fire Meeting Wilderness Objectives ——— (NO) ——— Supress
(YES)

Fire is < 10 Days Old ——— (NO) ——— Supress
(YES)

Fire is < 50 Acres in Size ——— (NO) ——— Supress
(YES)
MONITOR FIRE

* Five of six prescription criteria must be met to be in prescription.

APPENDIX C

DECISION MATRIX (Fuel Model F & Unclassified)

Life or Property Threatened ——— (YES) ——— Supress
(NO)

Boundary Threatened ——— (YES) ——— Supress
(NO)

Number of Prescribed Fires < 5 ——— (NO) ——— Supress
(YES)

Smoke Management Favorable ——— (NO) ——— Supress
(YES)

Prescription Criteria Met*

Temperature	< 85			
Minimum Relative Humidty	> 10%	———	(NO)	——— Supress
10 Hr. Fuel Moisture	> 5%			
20 Ft. Windspeed	< 15 mph			

(YES)

Current Weather Forecast Favorable ——— (NO) ——— Supress
(YES)

Current Fire Behavior Favorable ——— (NO) ——— Supress
(YES)

Ten Day Forecast Favorable ——— (NO) ——— Supress
(YES)

Equipment/Personnel Available ——— (NO) ——— Supress
(YES)

Fire is Meeting Wilderness Objectives ——— (NO) ——— Supress
(YES)

Fire is < 10 Days Old ——— (NO) ——— Supress
(YES)

Fire is < 50 Acres in Size ——— (NO) ——— Supress
(YES)
MONITOR FIRE

* Three of the four prescription criteria must be met to be considered in prescription.

APPENDIX D

COST ESTIMATES

It is estimated that annual expenditures in the wilderness area will total $34,600, with development and additional planning totaling $37,100. Specific expenditure components anticipated for the wilderness area are identified below.

1. Current annual expenditures for the Paiute and Beaver Dam Mountains Wilderness Areas:

Workmonths	$ 20,000
Vehicles	2,000
Sign & Blockade Maintenance	2,000
Clean up Undeveloped Campsites	2,000
Visitor Maps	5,000
Travel	1,000
Use Supervision and Monitoring	4,000
Annual Coordination with Grazing Permittees	2,000
TOTAL	**$ 38,000**

2. Nonrecurring expenditures resulting from wilderness management actions:

Submit Boundary Maps and Descriptions	$ 5,000
Inventory Springs, Improvements, Trails and Trailheads	6,000
Revise Visitor Brochure	9,000
Update Virgin River Campground Information	100
Develop LAC Monitoring Plan	16,000
TOTAL	**$ 36,100**

3. Wilderness management actions funded by other resource programs (no cost estimates have been made for these actions):

Mining Claim Validity Examinations and Environmental Assessments

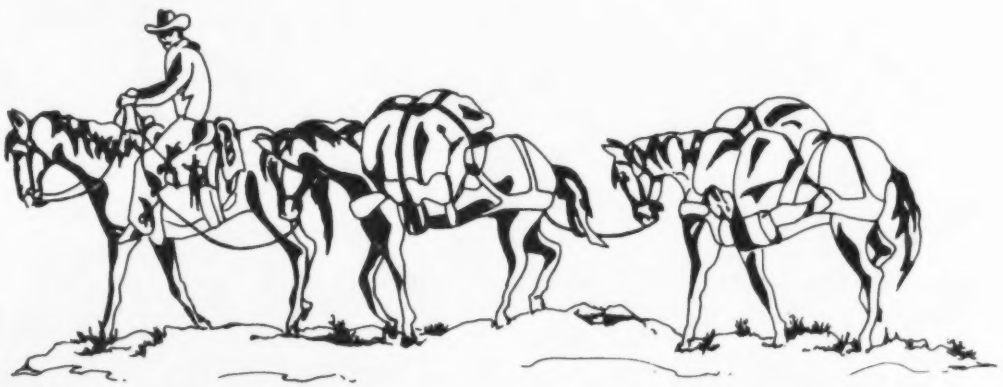
Allotment Management Plan Revisions

Habitat Management Plan Revisions

Rights-of-Way Revisions

Riparian Inventory

Water Filings



APPENDIX E

PUBLIC INVOLVEMENT PROCESS

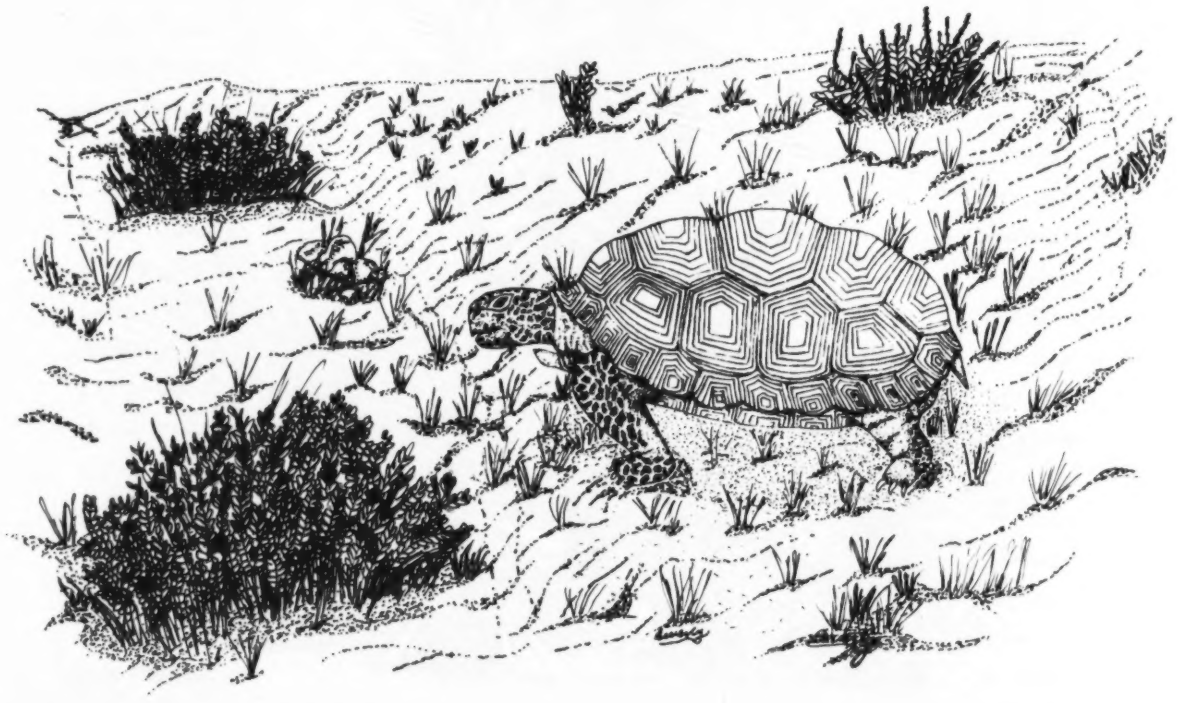
During the week of October 7, 1985, public scoping meetings were held in St. George, Utah and Kingman, Phoenix and Flagstaff, Arizona. The purpose of the meetings were to assist the BLM in identifying issues and concerns about how the wilderness area should be managed. Other comments were welcomed during the scoping period, including personal contacts and letters.

A few of the major concerns and suggestions were as follows:

1. Keep signs out of the wilderness area.
2. Establish a monitoring system to help determine impacts and overuse of the wilderness early.
3. Allow wildfires to burn unless life, private property, or critical wilderness values are threatened.
4. Allow reestablishment of native species that have disappeared as a result of human actions.
5. Allow use of motorized equipment for maintenance of nonconforming but accepted uses only after this has been determined to be the minimum tool.

The Arizona Strip District Advisory Council has also provided valuable information.

The draft management plan was sent out for a 45-day review period to those on the District's mailing list who have shown interest in management of wilderness. After this comment period, the final document was corrected and published.



APPENDIX F

LIST OF PLAN AND EA PARTICIPANTS

NAME	POSITION	ROLE
Jackson C. Johnson	Natural Resource Specialist	Plan writer
George W. Cropper	Shivwits Area Manager	EA writer
Kenneth C. Moore	Planning and Environmental Coordinator	EA writer
William Booker	Outdoor Recreation Planner	Reviewer
Timothy A. Duck	Wildlife Management Biologist	Reviewer
Charles Pregler	Wildlife Management Biologist	Reviewer
Evelyn Booker	Volunteer	Art Work
Kenneth G. Beckstrom	Supervisory Range Conservationist	Reviewer
L.D. Walker	Range Conservationist	Reviewer
John Ash	Range Conservationist	Reviewer
Carl Gossard	Range Conservationist	Reviewer
Robert Abbey	Outdoor Recreation Planner	Reviewer
Jane Closson	Writer-Editor	Reviewer
Keith Pearson	Sociologist/Planner	Reviewer
Toni Gardner	Secretary	Typing
Von Swain	Assistant District Manager for Resources	Reviewer
Larry Royer	Outdoor Recreation Specialist	Reviewer
Frank Rowley	Dixie Area Manager	Reviewer
Ray Mapston	Associate District Manager	Reviewer
Larry Lee	Outdoor Recreation Planner	Reviewer
Julian Anderson	Assistant District Manager for Resources	Reviewer
Curtis Warrick	Wildlife Management Biologist	Reviewer
Robert Smith	Natural Resource Specialist	Reviewer
Elved Williams	Realty Specialist	Reviewer
Richard Malcomson	Archaeologist	Reviewer
Dan McGlothlin	Hydrologist	Reviewer
George Ramey	Range Conservationist	Reviewer
Jim Currivan	Wilderness Program Leader	Reviewer
Sue Richardson	Wilderness Program Leader	Reviewer

APPENDIX G

GLOSSARY

ACTIVE PREFERENCE (GRAZING). The total animal unit months (AUMs) that a livestock operation or allotment is authorized to use in a year. Also referred to as Qualifications.

ACTIVE NONUSE (GRAZING). The active grazing preference not used or paid for by an operation during a year. Active nonuse and active use equal active grazing preference or qualifications.

ACTIVE USE (GRAZING). The number of AUMs that a livestock operation actually uses and pays for during a year.

ALLOTMENT. A land area where one or more operators graze their livestock. It generally consists of public land but may include parcels of private and state-owned lands. The number of livestock and season of use are stipulated for each allotment. An allotment may consist of one or several pastures.

ALLOTMENT MANAGEMENT PLAN (AMP). A livestock grazing management plan for a specific allotment, based on multiple-use resource management objectives. The AMP considers livestock grazing in relation to other uses of the range and in relation to renewable resources-watershed, vegetation, and wildlife. An AMP establishes the seasons of use, the number of livestock to be permitted on the range and the rangeland developments needed.

ANIMAL UNIT (AU). Considered to be the forage required for one mature (1,000 pound) cow or the equivalent based upon average daily forage consumption of 26 pounds dry matter per day (Range Term Glossary Committee, 1974).

ANIMAL UNIT MONTH (AUM). The amount of forage necessary for the sustenance of one cow or its equivalent for 1 month.

CARRYING CAPACITY (RECREATION). The maximum number of people at one time that an area or facility can accommodate without impairing the natural, cultural or developed resource.

CULTURAL RESOURCES. Those fragile and nonrenewable remains of human activities, occupations and endeavors as reflected in sites, buildings, structures or objects, including works of art, architecture and engineering. Cultural resources are commonly discussed as prehistoric and historic values, but each period represents a part of the full continuum of cultural values from the earliest to the most recent.

CUMULATIVE IMPACTS. Impacts occurring as a result of a succession of activities over a period of time.

ENDANGERED ANIMAL SPECIES. Any species in danger of extinction throughout all or a significant portion of its range. This definition excludes species of insects that the Secretary of the Interior determines to be pests and whose protection under the Endangered Species Act of 1973 would present an overwhelming and overriding risk to humans.

ENDANGERED PLANT SPECIES. Species of plants in danger of extinction throughout all or a significant portion of their ranges. Existence may be endangered because of the destruction, drastic change or severe curtailment of habitat or because of overexploitation, disease, predation or even unknown reasons. Plant taxa from very limited areas, e.g., the type localities only, or from restricted fragile habitats usually are considered endangered. See also Threatened Plant Species.

EPHEMERAL STREAM. A stream that flows only briefly after a storm or during snowmelt. See Perennial Stream.

HABITAT. A specific set of physical conditions that surround the single species, a group of species or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover and living space.

HABITAT MANAGEMENT PLAN (HMP). A written and officially approved plan for a specific geographical area of public land that identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

LIMITS OF ACCEPTABLE CHANGE (LAC). The amount of human-caused change to biophysical or social components which is tolerable without the loss of desired wilderness conditions.

LIVESTOCK OPERATOR. An individual, family, corporation or other entity that runs a livestock operation. An operator may have a single allotment, more than one allotment, or a portion of an allotment.

MANAGEMENT FRAMEWORK PLAN (MFP). A land use plan for public lands that provides a set of goals and constraints for a specific planning area to guide the development of detailed plans for the management of each resource.

MECHANIZED EQUIPMENT. "Mechanized equipment" means any machine activated by a nonliving power source, except small battery-powered, handcarried devices such as flashlights, shavers, Geiger counters and cameras.

MOTOR VEHICLES. "Motor vehicle" means any vehicle which is self-propelled or any vehicle which is propelled by electric power obtained from batteries. For wilderness purposes "mountain bikes" are included in this definition.

MULTIPLE USE. "... the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a

APPENDIX G

MULTIPLE USE (Continued). combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values, and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output." (From Section 103, FLPMA).

NATURALNESS. Refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." (From Section 2(c), Wilderness Act).

NONCONFORMING USES. Private rights and certain other uses that were authorized prior to wilderness designation and that Congress has directed to be allowed to continue even though they generally do not conform to the intent of wilderness designation.

OFF-ROAD VEHICLE (ORV). Any motorized vehicle designed for or capable of crosscountry travel on or immediately over land, water, sand, snow, ice, marsh, swampland or other natural terrain, excluding (a) any registered motorboat, (b) any fire, military, emergency, or law enforcement vehicle when used for emergencies and any combat or combat support vehicle when used for national defense, and (c) any vehicle whose use is expressly authorized by the respective agency head under a permit, lease, license, or contract.

PERENNIAL STREAM. A stream that flows throughout the year.

PETROGLYPH. An art figure or symbol cut, carved or pecked into a stone surface.

PRIMITIVE AND UNCONFINED RECREATION. Nonmotorized and nondeveloped types of outdoor recreation.

PRIMITIVE AREA. A natural, wild and undeveloped area, essentially removed from the effects of civilization.

PUBLIC LAND. Formal name for lands administered by the Bureau of Land Management.

RANGE IMPROVEMENT. A structure, development or treatment used in concert with management to rehabilitate, protect and improve public land and its resources to arrest rangeland deterioration; and to improve forage condition, fish and wildlife habitat, watershed protection and livestock production, all consistent with land use plans.

RAPTORS. Birds of prey.

RESOURCE AREA. An administrative division of a BLM District, which is headed by an area manager.

RIPARIAN. Situated on or pertaining to the bank of a river, stream or other body of water. Riparian areas and associated vegetation are often found along intermittent streams in the hot desert regions. Normally used to refer to the plants of all types that grow along streams or around springs.

ROADLESS. The absence of roads that have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

SOLITUDE. The state of being alone or remote from habitations; isolation in a lonely, unfrequented, or secluded place.

SPECIAL RECREATION AREA. Recreation Areas where congressionally recognized recreation values exist or where significant public recreation issues or management concerns occur. Special or more intensive types of management are typically needed.

SUPPLEMENTAL VALUES. Resources not required for an area to be designated a wilderness but that are considered in assessing the wilderness potential of an area. Such values include ecological, geologic, and other features of scientific, educational, scenic, or historical value.

SUSPENDED GRAZING PREFERENCE. That portion of a grazing preference which has been suspended and for which active grazing use will not be reauthorized until forage is available and allocated for livestock grazing use on a sustained yield basis.

THREATENED ANIMAL SPECIES. Any animal species likely to become endangered within the foreseeable future throughout all or a significant part of its range. See Endangered Animal Species.

THREATENED PLANT SPECIES. Species of plants that are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges, including species categorized as rare, very rare, or depleted. See Endangered Plant Species.

UNNECESSARY OR UNDUE DEGRADATION. Surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations. Failure to initiate and complete reasonable mitigation measures, including reclamation of disturbed areas, or creation of a nuisance may constitute unnecessary or undue degradation. Failure to comply with applicable environmental protection statutes and regulations thereunder will constitute unnecessary or undue degradation.

VALID EXISTING RIGHTS. Private or other authorized rights existing as of the date an area was designated as wilderness. Examples are valid mining claims, rightsof-way, and access to private land within the wilderness.

VISITOR USE. Visitor use of the wilderness resource for inspiration, stimulation, solitude, relaxation, education, pleasure or satisfaction.

VISUAL RESOURCE MANAGEMENT (VRM) CLASSES. Classification containing specific objectives for maintaining or enhancing visual resources, including the kinds of structures and modifications acceptable to meet established visual goals.

WILDERNESS. An uncultivated, uninhabited, and usually roadless area set aside for preservation of natural conditions. According to Section 2(c) of the Wilderness Act of 1964,

> A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is

APPENDIX G

WILDERNESS (Continued).

further defined to man in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

WILDERNESS CHARACTERISTICS. Key characteristics of a wilderness listed in section 2(c) of the Wilderness Act of 1964 and used by BLM in its wilderness inventory. These characteristics include size, naturalness, opportunities for solitude, opportunities for primitive or unconfined recreation, supplemental values, and the possibility of an area returning to a natural condition.

WILDERNESS MANAGEMENT PLAN. An officially approved planning document for specific congressionally designated wilderness areas and in some cases lands immediately adjacent to wilderness areas (e.g., trailheads). The wilderness management plan is the vehicle for implementation of the Bureau's *Wilderness Management Policy* (BLM Manual Section 8560).

WITHDRAWAL. An action that restricts the use of public land and segregates the lands from some or all of the public land or mineral laws.

APPENDIX H

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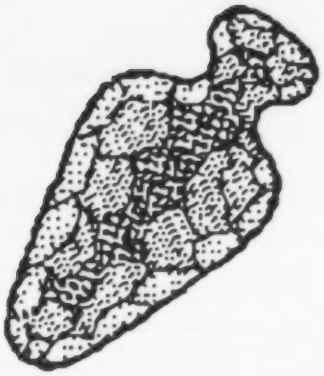

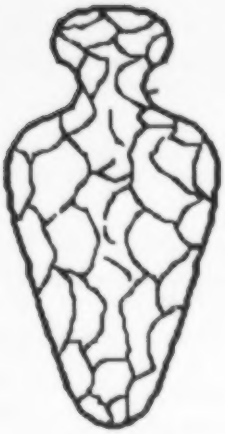

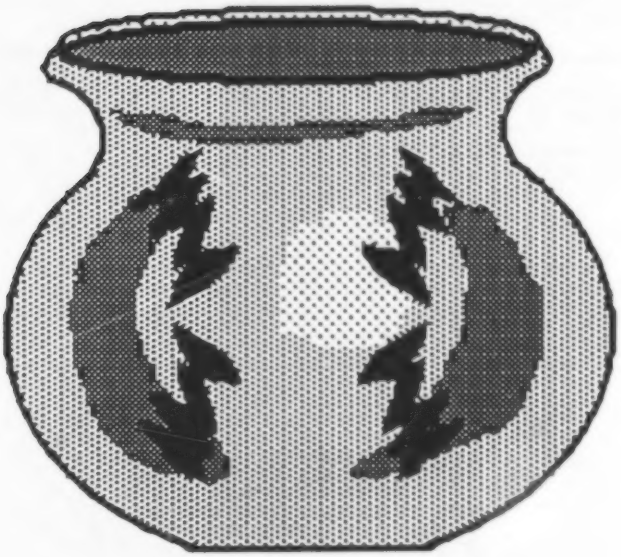

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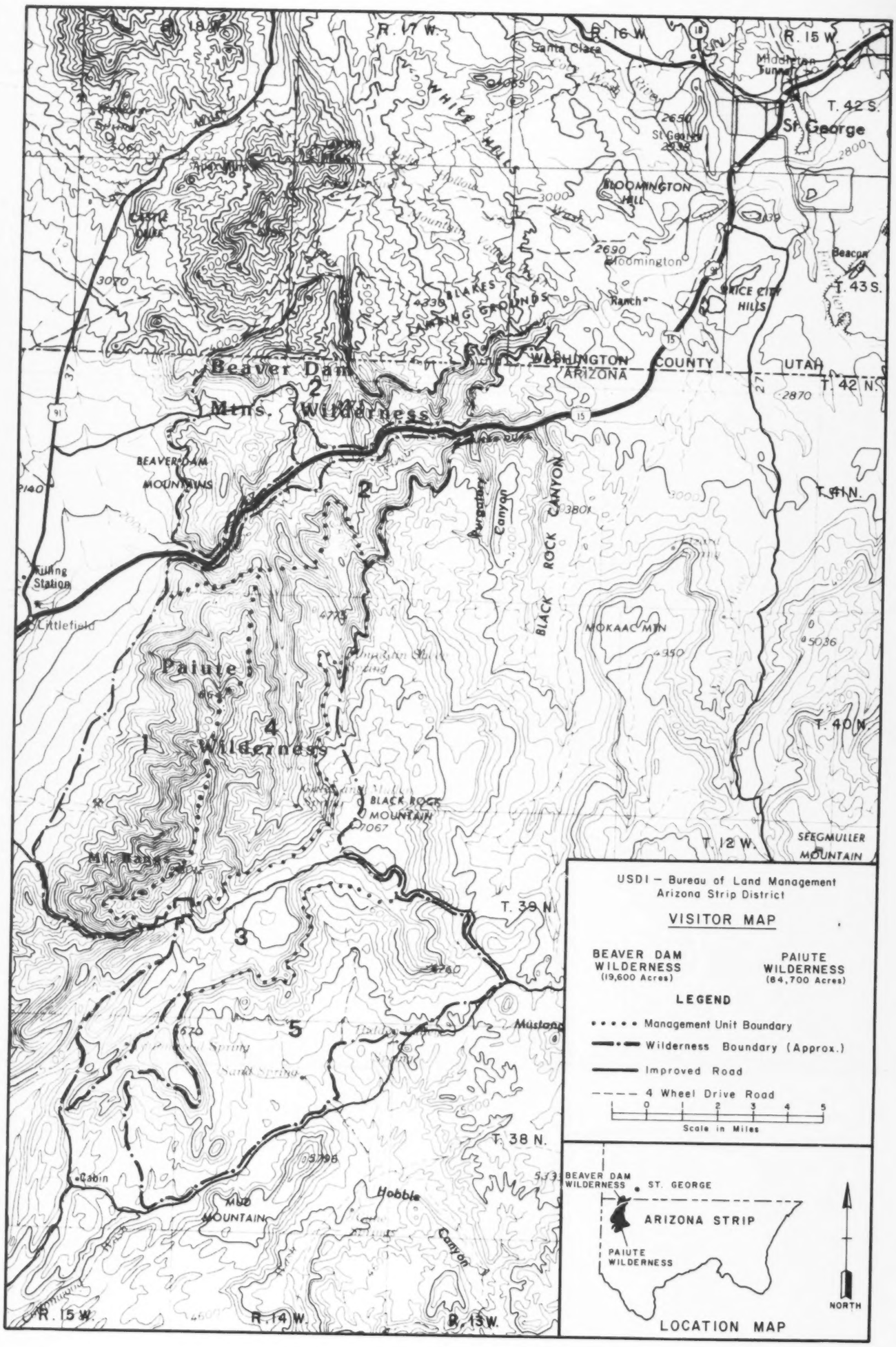
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Arrowhead Trail
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Mustang
T. 38 N.
Cabin
Mud Mountain
Hobble Canyon
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R. 14 W.
R. 13 W.
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Arizona Strip District
VISITOR MAP
BEAVER DAM WILDERNESS
(19,600 Acres)
PAIUTE WILDERNESS
(84,700 Acres)
LEGEND
Management Unit Boundary
Wilderness Boundary (Approx.)
Improved Road
4 Wheel Drive Road
0 1 2 3 4 5
Scale in Miles
BEAVER DAM WILDERNESS
ST. GEORGE
ARIZONA STRIP
PAIUTE WILDERNESS
NORTH
LOCATION MAP

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